

KODIAK SUBAREA CONTINGENCY PLAN

SCENARIOS SECTION

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SCENARIOS: PART ONE - MAXIMUM MOST PROBABLE DISCHARGE

Situation. In the early morning hours of March 15, a severe windstorm parts the mooring lines of M/V LOGSHIP, which is anchored in Kazakof Bay near the Silver Bay Logging Camp on Afognak Island. While attempting to get underway, the vessel is pushed onto the rocks. At 0300 Air Station Kodiak receives notification via VHF from the vessel's master. The master states that the hull has come into contact with the rocks, but the extent of damage is uncertain. The master feels that the vessel is not in danger of sinking and is not taking on water in any of the manned spaces.

Vessel particulars:

M/V LOGSHIP

Flag: Korean

Owner: Korean Lumber Corp., Inc.

Agent: North Pacific Maritime, Ketchikan

Status: 40% loaded with logs for Japan

Fuel: 150,000 gallons Bunker fuel

Tank configuration: unknown

Weather: winds are initially 50 mph with gusts to 90 mph. Winds diminish as the day progresses. Skies are clear with no precipitation.

Tides: Highs – 3:02 a.m., 8.6 feet and 3:15 p.m., 8.2 feet

Lows – 9:07 a.m., 0.6 feet and 9:16 p.m., 0.7 feet

Sunrise: 7:12 a.m.; Sunset 6:11 p.m.

Hour 0-9*: Initial Response Team (0300 to 1200)

*Note: For this scenario, the initial response team extends until hour 9, instead of hour 6 as indicated in the ramp up section, because the spill is discovered after dark and little action occurs until sunrise.

Notifications. Upon notification, Air Station Kodiak notifies MSD Kodiak, which then notifies MSO Anchorage. An initial command center is started in Anchorage at 0500, with plans to move the command center to Kodiak sometime in the afternoon. MSD Kodiak notifies the Kodiak Police Department and the police dispatch notifies the Kodiak Emergency Services Director and other local responders. MSO Anchorage notifies ADEC and federal stakeholders. Once notified, ADEC begins to notify other state agencies (ADNR, ADF&G, DES).

Initial Response Actions.

MSD Kodiak requests immediate transportation via USCG helicopter to the vessel with plans to set up a forward command post at the logging camp or onboard the vessel. The exact location will be determined once the MSD party arrives on-scene.

Within ADEC, response personnel communicate with natural resource trustee agency leadership to identify response priorities for booming and containment.

MSD Kodiak response personnel arrive on-scene at 0600 via USCG helicopter, advise the vessel master of the legal responsibilities for spill response, and instruct the vessel master to continually sound his tanks to check whether any oil has begun to leak. On-scene weather is high winds (steady at 40 mph with gusts to 80 mph). Skies are dark but begin to lighten by 0630. MSD Kodiak personnel are initially unable to visually detect a sheen. However, tanks are sounded and determined to be leaking bunker fuel. By hour 6, a sheen is visible.

Locally, in Kodiak, response personnel (at the direction of the Emergency Services Council) work to ensure that mechanisms are in place to prioritize protection of locally-important resources. Local responders (KIB) work to ensure that state agency protection priorities are aligned with those of the local community. The Borough or the ESC contact the City of Ouzinkie to notify them of the situation and to discuss protection of subsistence areas.

ADEC has one Environmental Health person located in Kodiak, and he is dispatched to the scene until ADEC spill response personnel arrive.

Command Center Establishment. The Incident Command will start to form in Anchorage, with plans to move the command center to Kodiak if the situation warrants. The KIB Assembly Chambers is selected as the site for the command center, if and when it is moved to Kodiak. Borough personnel begin to assemble the resources necessary to set up operations at the command center, such as telephones, fax machines, computers, and other office equipment. The Borough communications trailer is set up to enhance communications. The command center is designed to accommodate approximately 50 people, although not all of them will work out of the Assembly Chambers. The LOSC will also begin to consider alternate locations for a long-term command center, should the response run for a period of several weeks or months. The Resources Section of the KSCP and the Communications Plan in the Resources Section outline office and communications equipment needs for the command center, and these lists will be used as a guideline in setting up the command center in Kodiak.

A forward command post is also established near the spill site as a headquarters for on scene response personnel. The forward command post is established at the logging camp on Afognak (Silver Bay Logging). Initial response personnel, consisting of MSD Kodiak and additional Coast Guard responders, agree that it is a priority to establish a communications link between the forward command post and the command center as early as possible. This is initially accomplished by using the telephones at the logging camp.

ICS Mobilization. By 0800, the ICS begins to form as additional personnel are called on-scene (transported via USCG helicopters) and to the command center. Agency involvement is still limited primarily to ADEC and the USCG. MSO Anchorage has already set up an IC, which is being moved to a command center in Kodiak.

By approximately 0900, the KIB had been notified of the situation and of the need to establish a command center in Kodiak. The Emergency Services Director calls an Emergency Services Council meeting. The ESC is the policy-making board for emergency response in Kodiak, and the only ones with the authority to reassign personnel during an emergency response. The Emergency Services Director (LOSC) contacts Kitoi Bay Hatchery and the City of Ouzinkie regarding equipment mobilization, and the LOSC begins to work on identifying sensitive areas in cooperation with ADF&G and USFWS.

The Coast Guard sends a C-130 to Anchorage to transport USCG personnel, leaving only a skeleton crew at MSO Anchorage to answer phones, etc. One or two command-level people also remain in Anchorage. Other USCG personnel continue working with KIB to set up the command center in Kodiak and mobilize resources. The FOSC begins mobilizing members of the Pacific Strike Team from CA with bunker fuel response equipment. The strike team responds with approximately 6 people, and they will arrive on-scene with most of the necessary equipment and resources to conduct all vessel lightering operations. The strike team will arrive in their own C-130 around sunset.

Staging Areas. Shoreline areas near the logging camp and spill are designated for use as staging areas. Because of the high winds, response equipment (boom, etc.) which arrives on-scene via helicopter will not be deployed immediately. Until the conditions die down, this equipment will be staged in a shoreline area accessible to both helos and landing craft. An equipment check-in point is established at the staging area to track equipment and staffed with USCG personnel. MSD Kodiak response personnel or the LOSC contact the logging camp and request use of the logging camp's oil spill response equipment. They also request personnel support (primarily administrative and organizational) from the logging camp until additional responders arrive on-scene. The SOSC agrees to allow the logging camp to release equipment as necessary. The logging camp releases its equipment, but the Silver Bay containment boom and sorbents are determined to be of limited value to this spill response as it is designed for diesel/gasoline spills, and this incident involves Bunker "C" oil, which is not easily contained by boom.

Equipment Mobilization and Deployment. Weather conditions (primarily winds) are too severe during hours 0-9 to consider deploying equipment. The FOSC recognizes that the RP does not have the resources to respond to the spill and initiates the necessary paperwork to release and mobilize federal resources to supplement the response, thus federalizing the spill response. A federal project number is assigned in order to fund response operations. Responders begin to mobilize equipment from the USCG base and Anchorage, in anticipation of calmer seas. The petty officer at MSD Kodiak acquires as much containment boom as is locally available, and will begin loading this equipment on Coast Guard helicopters as soon as the winds die down to a safe level. The MSD staff is also beginning to call for USCG boats to deploy the boom as soon as the weather abates.

The LOSC contacts the state (ADEC) to get permission to mobilize the KIB-owned equipment staged in Ouzinkie by activating the response agreement with Ouzinkie. Permission is obtained and the Ouzinkie spill response equipment is mobilized to the staging area at the logging camp using local fishing vessels and skiffs from Ouzinkie. Because the Ouzinkie equipment is owned by the KIB, it may be released by the LOSC without initiating additional contracts. The equipment packages fit onto most fishing vessels. The on-scene coordinators also contact CISPRI and initiate a contract to use CISPRI resources. CISPRI gets approval from its Board of Directors to release equipment for the non-member, and then begins to mobilize resources. CISPRI personnel explain to the government response agencies that some of their equipment may not be as effective in responding to this spill, because Bunker C fuel differs in chemical and physical properties from other crude and non-persistent oils, which are more commonly transported by CISPRI members.

CISPRI mobilizes their response vessel, the BANDA SEAHORSE, within an hour of approval, and begins to transport additional response equipment via aircraft. The Unified

Command contacts SERVS in order to initiate contracts with local response vessels. The LOSC begins to implement a volunteer action plan to coordinate volunteers as they arrive on-scene.

Hour 9-96: Transitional Response Team

Weather: Winds are diminishing and by Hour 12, they have decreased to 25 knots.

Quantity of oil spilled: Still unknown. Tanks are definitely leaking bunker fuel. Vessel is stable and in no immediate threat of sinking. By hour 12, the oil has traveled almost as far as the Triplets Islands (see attached trajectory).

On-Scene Response. By approximately noon (hour 9), we start to see increased activity and equipment mobilization. At this point, the MSD Kodiak responder is the sole FOSC representative on-scene in Afognak. No other state or federal agencies have arrived on scene yet, and there are no other vessels on scene.

USCG personnel request that the NOAA Scientific Support Coordinator develop a spill trajectory. Although the amount of spilled oil is still uncertain and weather conditions are dynamic, a reasonable trajectory is completed by 1200, based on information gathered since 0500. (See spill trajectory attached)

Borough personnel will provide assistance with setting up the command center, providing logistical support, office space, communications equipment, and other locally available resources. The LOSC and borough personnel also begin to look for a backup location for the command center to be moved as the response continues over the long term. The local government (KIB) sets up a public information center in town at the Kodiak Library to address public concerns. The Coast Guard also has their own Public Affairs people who begin to work on public outreach and coordinate media coverage. During the first few days of the response, several different public information outlets may be established. However, as the ICS forms, a joint information center with federal, state and local public affairs representatives will be formed.

By 1200, ADFG begins to coordinate their efforts with other natural resource agencies and the local government/community to identify sensitive areas at risk.

By 1200, ADEC personnel have attempted to contact the Responsible Party's Protection & Indemnity club, begun to ramp up state resources, and continued to contact other state agencies. ADEC assigns response personnel to ICS positions, mostly into the planning section, some with some assigned to operations. ADEC tries to include ADFG and ADNR representatives with ADEC personnel on the initial flight to Kodiak and begin to deploy on-scene.

As they arrive at the command center, ADEC personnel begin to formulate a Sitrep, which is the situation report sent by ADEC to the other state resource agencies, federal agencies, and Juneau ADEC office, summarizing state actions so far. The ADEC public information office in Juneau uses the Sitrep to develop an initial press release. The Coast Guard will generate a POLREP, which is also a situation report, for essentially the same purposes as ADEC's Sitrep.

Early in the response (by hour 12, 1500) the Unified Command contracts with an archaeologist, because there are several important historical sites adjacent to the spill, such as Monk's Lagoon. The LOSC suggests that the Alutiiq museum may be able to provide the necessary expertise. The Unified Command also initiates contracts with wildlife response organizations and other specialists in order to mount an effective response.

By 1600 - 1800, as flying conditions improve and it becomes easier to transport people and equipment (helos can land), ADEC responders (with possibly one or two ADFG/USFWS responders) begin to arrive on-scene (logging camp on Afognak Island) to initiate containment and response activities and to identify wildlife protection priorities. Volunteer responders arriving on-scene in vessels are directed by the LOSC to work through the volunteer coordination center in Kodiak. Two CG helicopters are used to transport personnel and equipment, which continues in earnest between 1600 and 1800. By 1800, one helicopter full of ADEC responders (6-10) has landed, and several loads of equipment, including light sets, portable generators and other support equipment have arrived on-scene. The initial ADEC team brings a "crash kit" of office and planning supplies, laptop computers, and other office equipment, and they also bring their own PPE, mustang suits, etc. The limited support equipment which arrives in the helicopters is used to set up a forward command post, and oil spill response equipment is stored at the staging area overnight. Due to the large amount of equipment being mobilized, several trips between Kodiak and the staging area are required. Equipment transport is prioritized according to the needs on-scene, with operational equipment such as boom, anchors and PPE prioritized over other support equipment. Coast Guard and privately contracted vessels are also used to transport equipment to the scene. Transit time from Kodiak is approximately 12 hours, but these vessels are able to operate after dark (when USCG helicopters are no longer flying.)

As the weather calms and the response proceeds (Day 2), additional personnel begin to arrive on-scene. The Kodiak USCG air station continues to provide the primary logistics support for transporting and staging equipment. The USCG VOSS system and additional oil spill response equipment from the MSD Kodiak and other commercial/industry sources in Kodiak is transported on-scene from MSD Kodiak on a CG cutter, which arrives in Kazakof Bay by 2200 .

By daybreak on Day 2, ADEC has begun to make logistical arrangements to transport personnel and resources from Anchorage. As ADEC and other agency personnel arrive on-scene and in Kodiak, the command center in Kodiak is beginning to come together and the ICS continues to form and expand.

By 1800, the response has begun to coalesce and the ICS continues to expand. An initial incident action plan has been developed. At this point, Ouzinkie community members are anxious to begin deploying response equipment to protect local streams and subsistence use areas. However, due to the sustained winds and dwindling daylight hours, the Unified Command decides to delay boom deployment until dawn.

Once the command center is up and running, the ICS will continue to grow and specialize, with regular briefings and situation reports. As early as possible, the Public Information Officer(s) will work with communications and computer experts to establish an internet site to keep the public up-to-date on response activities, spill trajectory, and other situation specifics. The Unified Command web site established during the M/V KUROSHIMA spill was considered to be

a public relations success and would be used as a model for future medium to large sized spills in the Kodiak Subarea.

Equipment Mobilization and Deployment. By hour 12 or so, there is approximately 3000 feet of boom available on-scene (KIB boom from Ouzinkie and boom from the logging camp) and ready to deploy as soon as the weather permits. Coast Guard buoy tenders back in Kodiak are being loaded with as much boom as is locally available and begin to travel to the scene. It will take about a half a day for the buoy tenders to arrive on-scene, and meanwhile USCG helicopters are bringing the MSD boom to the staging area. The vessels and helos will also be loaded with equipment such as PPE, which would be staged on the beach as it arrives. The winds do not die down until 1600 or so, and until this point it is not possible for a helicopter to land.

The FOSC may direct the RP to contract with SERVS or Chadux, both of whom train local fishing vessels for oil spill response. The LOSC will work with the RP and Unified Command to coordinate all volunteers arriving on-scene.

Equipment deployment does not commence until daybreak of the second day (hour 28); however by the afternoon of day 1, crews have begun to stage boom and other equipment at certain key shoreline locations which are accessible on the Kodiak road system. The KIB-owned equipment staged at Ouzinkie, as well as other containment boom maintained by the village are mobilized to be ready for deployment at first light. The City of Ouzinkie has approximately 3,000 to 4,000 feet of boom on hand, which will be used to boom the city harbor. There is another 3,000 feet of boom in the KIB equipment package staged at the village, which will also be used in the response, and MSD Kodiak is able to mobilize approximately 4,000 feet of boom as well by hour 18. Some of this KIB and MSD boom will be used to boom off the salmon streams near Ouzinkie, and the rest will be used to boom off the streams prioritized by the sensitive areas group (See Wildlife Response discussion).

Communications. At this point (hour 12), radio communications from Afognak to the command center in Kodiak are still complicated and not reliable. It will take a few days for a communications system to support the on-scene response to evolve, and in the meantime response personnel use VHF radios and Coast Guard high sites to communicate with the evolving command center. CISPRI has portable, self-contained communications units set up with a portable repeater, phone and fax, which can be sent to the scene with initial responders.

Wildlife Protection and Response. ADEC and the FOSC have both notified the appropriate Natural Resource Trustee Agencies. USFWS, ADNR, NMFS and ADFG wildlife experts begin to arrive at the command center with other ADEC personnel. The FOSC initiates contracts with seabird and sea mammal responders, including the WRRT (Wildlife Rapid Response Team from Homer), IBRRC (International Bird Rescue and Research Center), and International Wildlife Research (for sea otters & marine mammals). Arrival times for wildlife responders are estimated to be early afternoon of Day 2.

According to the trajectory, oil hits the Triplets by Hour 12 (1500), endangering a seabird colony in that area. Due to the high winds, the birds have congregated on the water in the lee of the island, and are therefore safe from the immediate impacts of the oil. Should the wind shift or die down, however, this population would remain in danger.

At this time of year, there are otter populations feeding in the open water and they are also at risk of being oiled. Wildlife responders prepare to capture and treat oiled wildlife as sea and wind conditions die down, and undertake the necessary paperwork to obtain hazing and capture permits.

If local residents arrive on-scene (via private vessels) anxious to assist with wildlife protection and rescue, they are directed through the planning section (volunteer coordinator) to the contracted wildlife response groups. Volunteers are dissuaded from interfering with ongoing wildlife response operations.

As wildlife responders arrive on-scene with hazing kits and other support equipment, LOSC representatives assist them with logistical considerations as they set up a station at the forward command post. The logistics section works with wildlife responders to identify potential locations for wildlife collection, cleaning and rehab stations and the Incident Commander (FOSC) begins to direct the development of a disposal plan for any dead wildlife.

Once the weather has abated enough to begin boom deployment (morning of Day 2), Ouzinkie harbor and the nearby salmon streams are boomed (approximately 4,000 feet of boom total). USCG response equipment (approximately 10,000 ft. containment boom, sorbent material, a VOSS, and several small skiffs) from Kodiak arrived in Kazakof Bay via Coast Guard cutter the evening prior. Next, boom will be deployed at the Monashka Bay creeks (Monashka and Pillar Creeks), Island Lake Creek (if the surf is not too high), and the Buskin River, in that order. The next protection priorities identified are the lagoon on Long Island, the two lagoons on the backside of Spruce Island and, if threatened, the Women's Bay and Chiniak salmon streams, beginning with the Russian River and Sargent Creek and moving sequentially toward Chiniak. Monk's Lagoon would also be a protection priority for natural resource and historical reasons, and boom may be deployed there as well.

Because most of the salmon streams identified above are road accessible, land-based crews will deploy the boom at the bridges at each of these streams. While the mouths of the streams may not be protected with this strategy, it will allow for the greatest number of streams to be protected with a limited amount of boom (approximately 50 feet per stream). If the trajectory proves to be incorrect or if the wind shifts, booming strategies will be revised to protect additional areas at risk.

It is possible that the amount of oil which actually reaches as far as Monashka Bay or even the Chiniak salmon streams is extremely minimal, as much of the oil may accumulate on Spruce Island. However, even if the perceived risk is minimal, defensive booming of the salmon streams on the Kodiak road system will be carried out during day 2.

As the winds die down the next day (hour 28 and on), wildlife responders consider the viability of hazing threatened wildlife populations. This decision is made on a site-by-site basis, contingent upon a variety of considerations and supported by the necessary permits. The major priorities for wildlife responders continue to be capturing and treating injured wildlife and collecting carcasses before they can be consumed by other animals.

By Hour 28-30, wildlife collection points have been established near the City of Kodiak harbor and also near the spill site. ADFG and USFWS biologists identify oiled carcasses and record the appropriate data before freezing or disposing of the animals. A disposal plan is coordinated with the local landfill, and freezer vans are set up at each of the collection points as well as at the

landfill. If the number of dead animals exceeds the capacity of the landfill, arrangements will be made to dispose of the animals in alternate locations. Injured or oiled wildlife are handled by the contracted rehabilitation organizations according to their internal operating procedures. Wildlife responders may set up rehabilitation and cleaning stations in Kodiak, or they may arrange to transport oiled wildlife to Homer or Anchorage. Any sea otters killed by the oil will be necropsied before disposal.

Sensitive Areas Identification and Protection. As soon as it is apparent that oil is in the water (hour 6), the local government begins to consult with the Natural Resource Trustee Agencies regarding sensitive area protection priorities. It is likely, given the weather conditions, that no boom will be deployed until daybreak of the second day (hour 28), therefore these individuals consult the trajectory for hour 24 as they begin to identify protection priorities and sensitive areas at risk.

In recommending sensitive areas for protection, the local government and resource agencies use the prioritization scheme in the Sensitive Areas section of the KSCP, balancing natural resource population information with human use and subsistence considerations. The resource agencies provide information on marine mammal populations and rookeries, seabird concentrations, and shoreline sensitivity. Local residents and the local government provide input on human use, recreation, and subsistence areas.

While it seems certain that no boom will be deployed until at least day 2, protection priorities are pre-identified and submitted to the Operations Section by approximately hour 18 (2100 on Day 1). Depending upon how early these areas are identified, response equipment may be pre-positioned at those streams and shoreline areas which are road accessible.

The resource trustees and local government representatives determine that the most effective use of boom would be to deploy exclusionary and deflective boom at all the major road-accessible salmon streams downstream from the spill site. In addition to providing salmon habitat, these streams are identified as sensitive areas due to their recreational and subsistence use (because of proximity to road system). It is suggested that boom be deployed at the heads of bays but due to the high winds and rough seas, and the limited number of trained personnel, this option is tabled for reconsideration when the weather abates.

The local government indicates that it is a local priority to protect the area around Ouzinkie Narrows and to boom off the village harbor in order to protect the salmon stream it contains. There are two other salmon streams in the vicinity of Ouzinkie and they, too, are identified as booming priorities because of their high subsistence fishing use. The local government next identifies Monashka Bay as a protection priority, because it is an important recreational area and also a vulnerable tidal flat. Monashka Bay is selected as a protection priority, with emphasis on the two salmon streams it contains (Monashka Creek and Pillar Creek).

After Monashka Bay, the salmon stream in Mill Bay (Island Lake Creek) is identified as a booming priority, as long as the surf is not too high in Mill Bay. After that, booming priorities continue stream by stream moving toward Chiniak. Once all threatened salmon streams are protected, protection priorities will extend to entire beaches, with emphasis on areas that are commonly used for recreation or subsistence. Because of the potential for high surf at Mill Bay beach, it is designated as a potential collection area, depending on how much oil reaches that far down. Although it is terribly unpleasant to consider “sacrificing” a beach, it is apparent that Mill

Bay is a natural collection beach and that it would be feasible to use the beach for collection purposes due to its easy road and vehicle access.

Based on the spill trajectory, Ugak Island is identified as a protection priority because it is a marine mammal haul out, although it may be a difficult area to protect because of deep water and rough surf.

Clean up and Recovery. From Day 2 (hour 28) on, as people arrive on scene and boom deployment is accomplished, the focus of the response will begin to switch from protection to oil removal and recovery. After the initial influx of containment boom and other initial response equipment, storage equipment is transported to the scene. Temporary storage bladders are transported from MSD Kodiak, and a local barge *Anna Lee* with a storage capacity of over 100,000 gallons, is contracted by the FOSC and dispatched to the scene (ETA sundown day 2). Recovery concerns will include protecting resources, and addressing issues such as lightering and salvage. The Pacific Strike Team will be able to provide some lightering expertise. Navy SUPSALV should be consulted for salvage issues, or the RP may choose to contract with a private salvage company to remove the vessel from the rocks.

After Day 3 or so (hour 52), disposal will become an issue. Bunker oil is extremely problematic from a removal standpoint, as skimmers are not effective in separating bunker oil from water. Bunker C has the consistency of peanut butter or “flubber”, and it is extremely hard to collect, load, and generally difficult to deal with. Oily wastes, debris and recovered bunker fuel are transported to Kodiak for disposal.

Mill Bay, Abercrombie Beach, or another shoreline with road access may be selected as a keeper/collection beaches because it is possible to get heavy equipment onto the beach for removal. Landing craft will bring oil and debris to the shore, where it will be loaded into dumpsters or totes and transported from the beach for ultimate disposal. The RP (Incident Commander) is responsible for developing and implementing a disposal plan which complies with existing local, state and federal laws and regulations. ADEC and the Kodiak Island Borough will oversee this process. Shoreline Cleanup and Assessment Teams are organized and deployed to assess shoreline impacts and make recommendations regarding additional cleanup.

Personnel Considerations. Initially, lodging and food are provided by the Silver Bay Logging Camp and supplemented with supplies from Ouzinkie. The school at the logging camp is used for temporary lodging and to cook meals for responders.

Figure G-1: Spill Trajectory Hour 6



Kazakof Spill

Estimate for: Hr 6

Prepared: 1357, 2/5/98

MASS Analysis

NOAA/HAZMAT/MASS (206) 526-6317



These estimates are based on the latest available information. Please refer to the trajectory analysis briefing and your Scientific Support Coordinator (SSC) for more complete information.

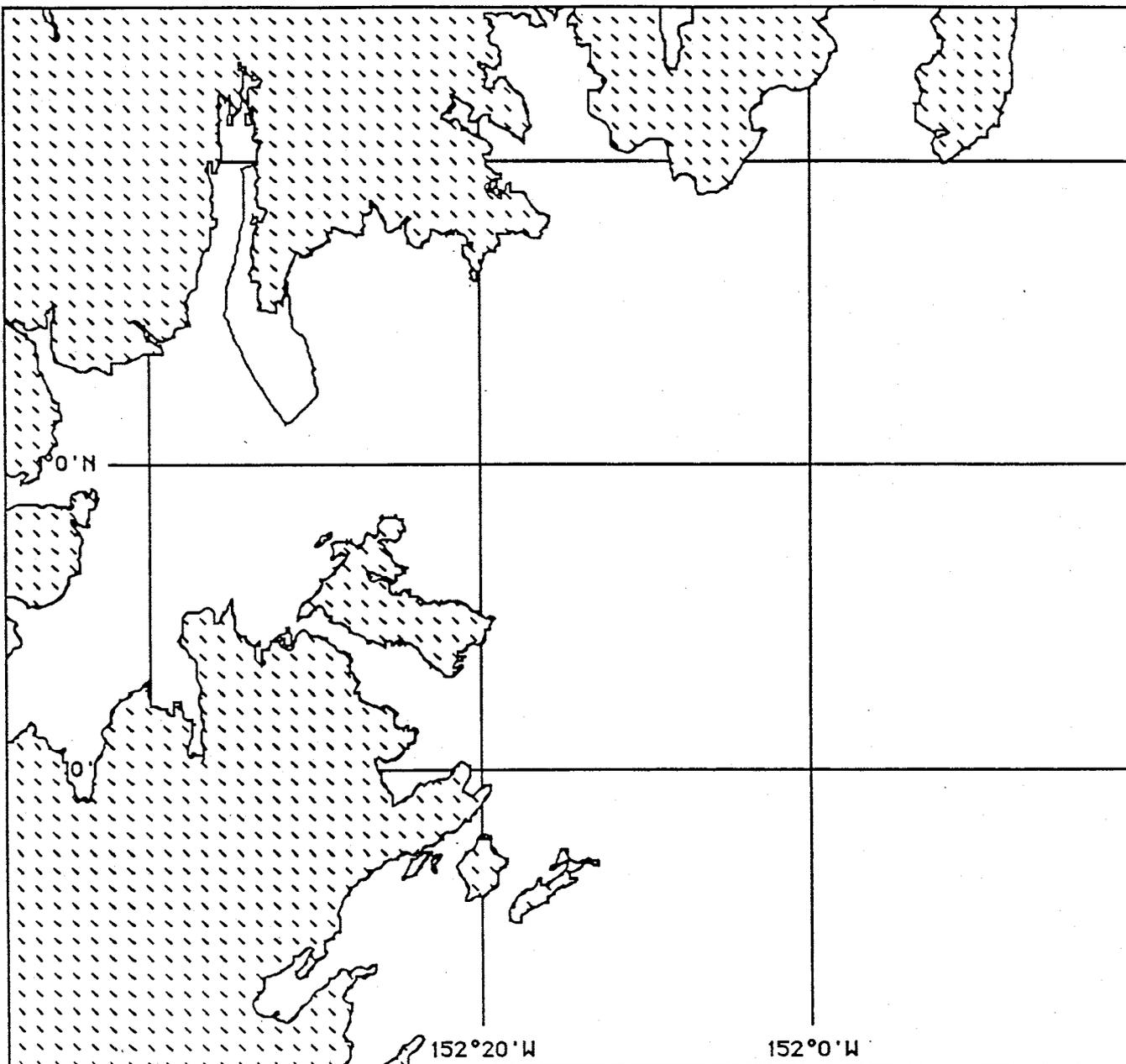


Figure G-2: Spill Trajectory Hour 12



Kazakof Spill

Estimate for: Hr 12

Prepared: 1357, 2/5/98

MASS Analysis

NOAA/HAZMAT/MASS (206) 526-6317



These estimates are based on the latest available information. Please refer to the trajectory analysis briefing and your Scientific Support Coordinator (SSC) more complete information.

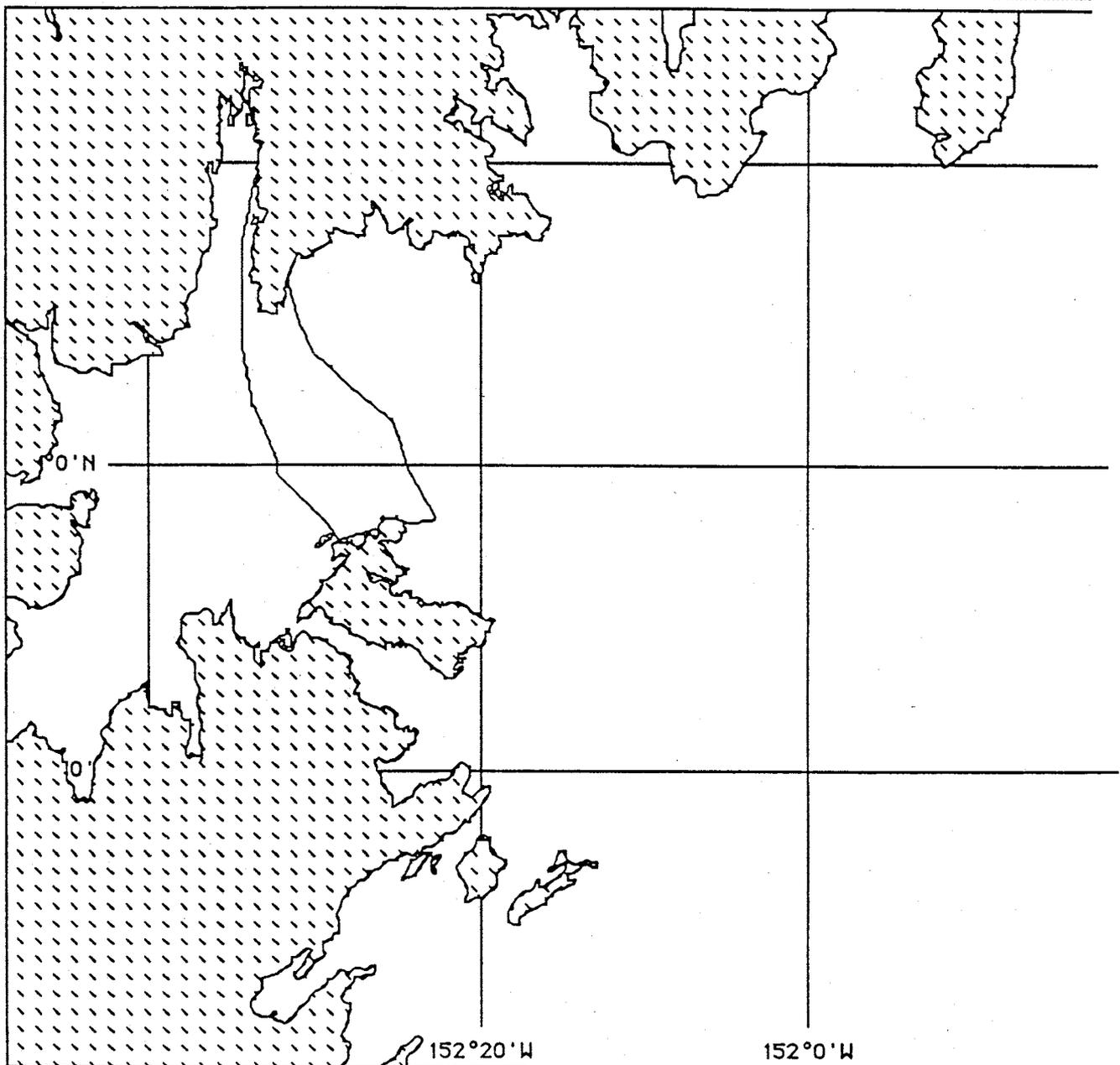


Figure G-3: Spill Trajectory Hour 24



Kazakof Spill

Estimate for: Hr 24

Prepared: 1357, 2/5/98

MASS Analysis

NOAA/HAZMAT/MASS (206) 526-6317



These estimates are based on the latest available information. Please refer to the trajectory analysis briefing and your Scientific Support Coordinator (SSC) for more complete information.

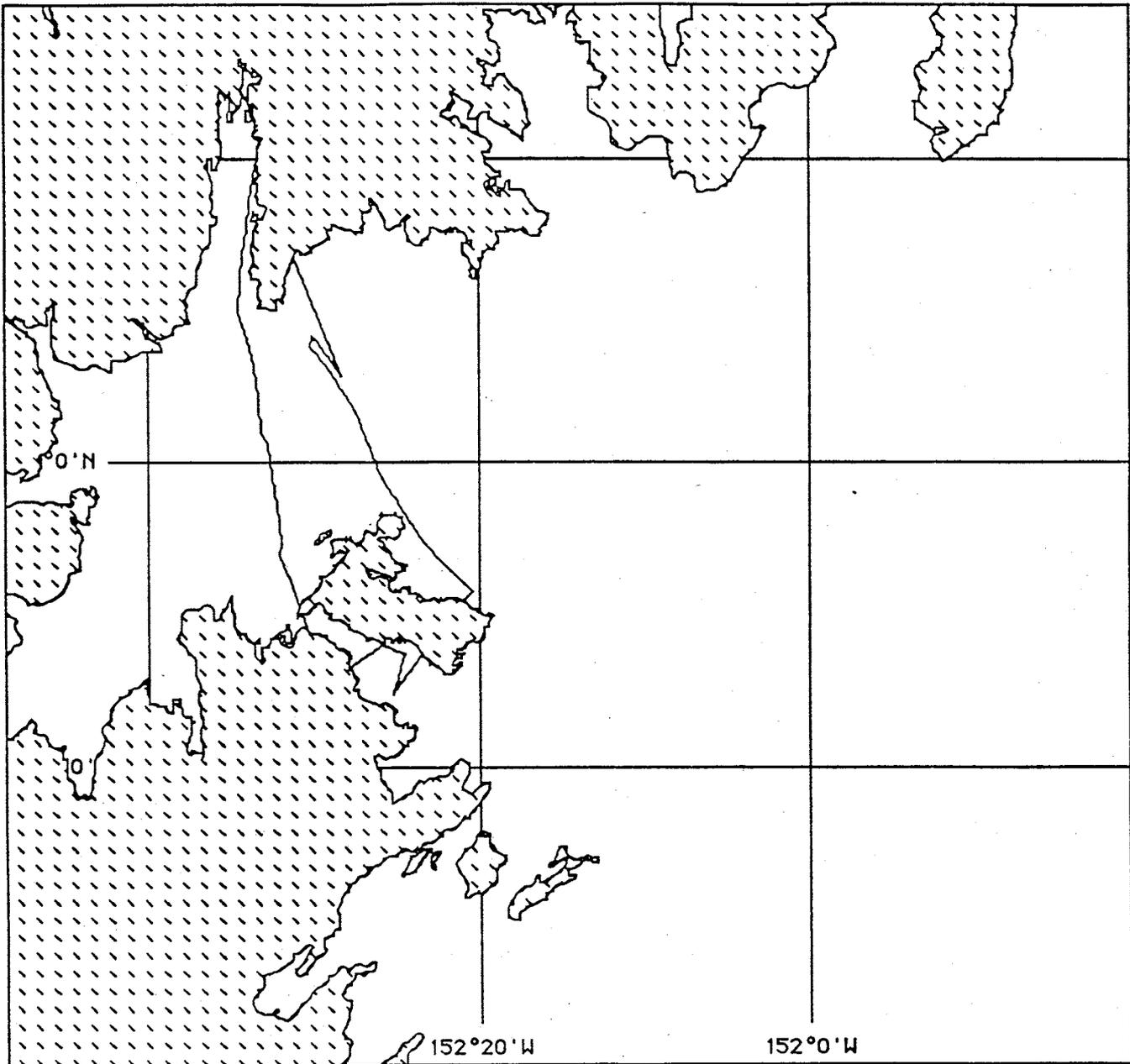


Figure G-4: Spill Trajectory Hour 48



Kazakof Spill

Estimate for: Hr 48

Prepared: 1357, 2/5/98

MASS Analysis

NOAA/HAZMAT/MASS (206) 526-6317



These estimates are based on the latest available information. Please refer to the trajectory analysis briefing and your Scientific Support Coordinator (SSC) for more complete information.

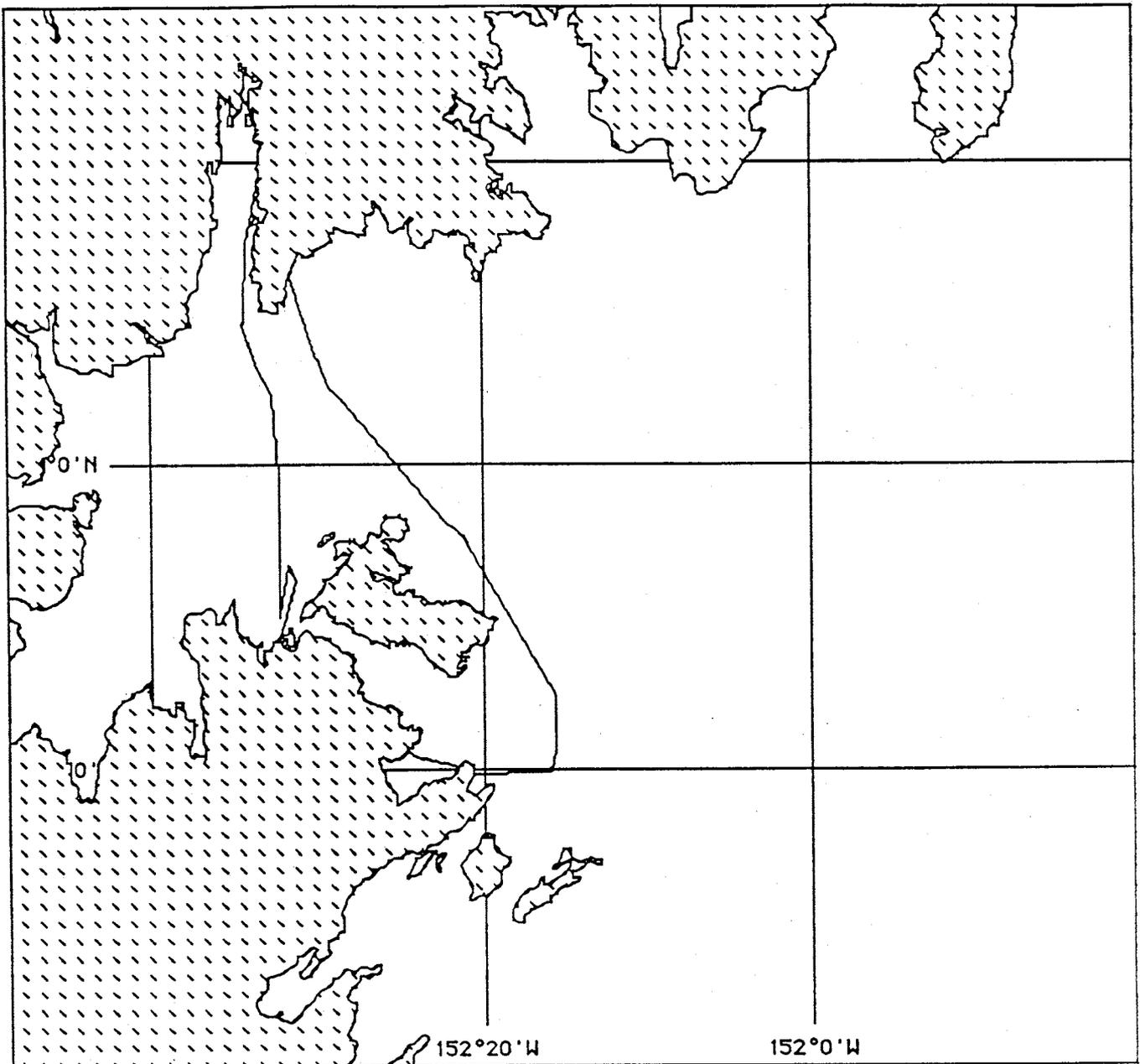


Figure G-5: Spill Trajectory Hour 72



Kazakof Spill

Estimate for: Hr 72

Prepared: 1357, 2/5/98

HAZMAT Analysis

NOAA/HAZMAT/MASS (206) 526-6317



These estimates are based on the latest available information. Please refer to the trajectory analysis briefing and your Scientific Support Coordinator (SSC) for more complete information.

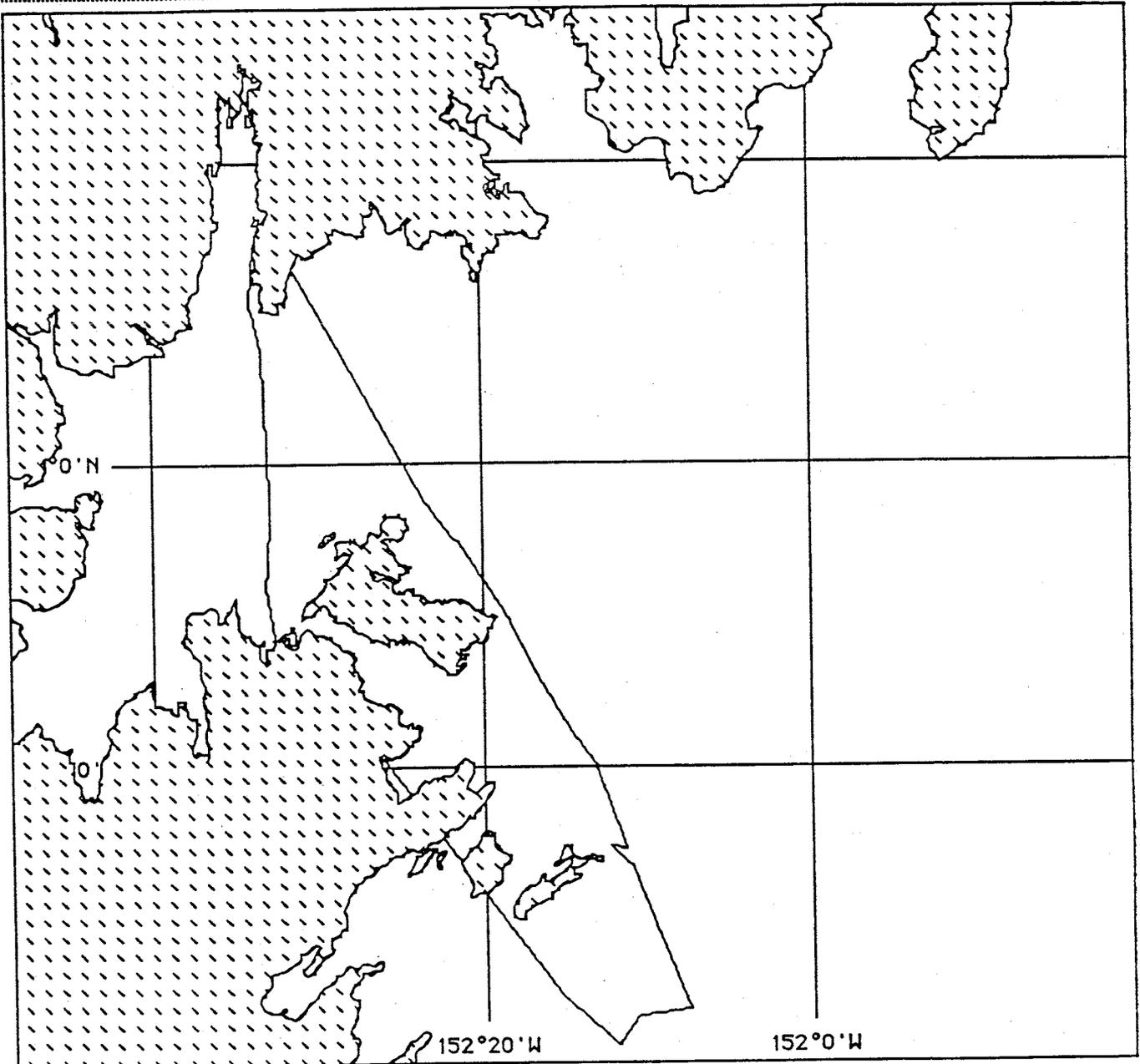


Figure G-6: Spill Trajectory Hour 96



Kazakof Spill

Estimate for: Hr. 96

Prepared: 1357, 2/5/98

MASS Analysis

NOAA/HAZMAT/MASS (206) 526-6317



These estimates are based on the latest available information. Please refer to the trajectory analysis briefing and your Scientific Support Coordinator (SSC) for more complete information.

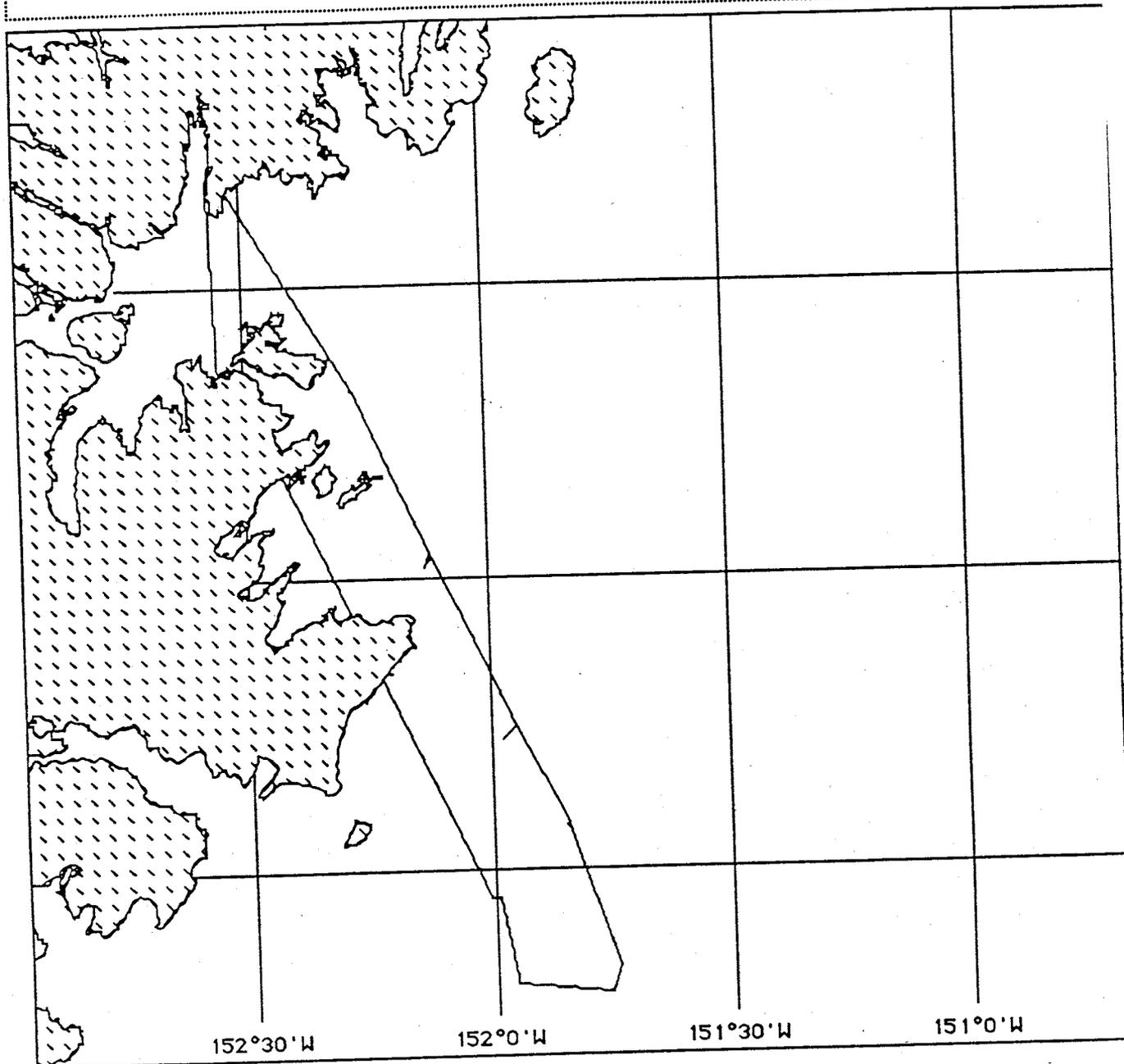


Figure G-7: Oil Budget Table

Oil Budget Table

ADIOS™ 1.1.3



Oil Name: FUEL OIL NO.6
 API: 11.8
 Emulsification Const: 18% evaporated
 Wind Speed: Constant at 50 kn
 Water Temperature: 45 F
 Instantaneous release of 150000 gal
 Pour Point: between 24.8 F and 59.0 F
 Wave Height: Default values
 *Insufficient emulsification data, answers may be inaccurate.

Time hours	Total Released gallons	Evaporated percent	Dispersed percent	Floating percent
0	150,000	0	0	100
3	150,000	0	0	100
6	150,000	1	0	99
9	150,000	3	1	96
12	150,000	5	2	93
15	150,000	7	3	90
18	150,000	9	5	86
21	150,000	10	7	83
24	150,000	12	8	80
30	150,000	15	11	74
36	150,000	17	14	69
42	150,000	18	17	65
48	150,000	19	20	61
60	150,000	20	24	56
72	150,000	21	28	51
84	150,000	22	32	46
96	150,000	23	36	41
108	150,000	24	39	37
120	150,000	24	41	35

SCENARIOS: PART TWO - TYPICAL DISCHARGE

Situation. At 0500, June 15, USCG Air Station Kodiak receives a call from the salmon tender F/V ROTTEN LUCK stating that the vessel had collided with another vessel, F/V BAD DAY, in the channel at the mouth of Larsen Bay. Both vessels have sustained damage and are leaking oil. All crewmembers were successfully removed from the vessels by another boat fishing nearby. The two vessels have onboard an estimated total of 12,500 gallons of diesel fuel and 600 gallons of lube and hydraulic oils, which is rapidly leaking at an undetermined rate. There is a westerly wind at 20 knots.

Notifications. MSD Kodiak is notified of the situation by the Air Station at 0515. MSD Kodiak notifies MSO Anchorage, ADEC and the Kodiak Emergency Services Director. MSO Anchorage and ADEC notify other state and federal agencies. Because it is a relatively small spill of non-persistent oil, it is determined that the initial response team will be limited to MSD Kodiak.

At 0700, an Incident Command Center is established at MSD Kodiak.

Initial Response Actions. MSD Kodiak requests transport via Coast Guard helicopter. He gathers basic equipment (including the “consumables” supplement to the KIB equipment package in Larsen Bay) and is transported to the scene. He arrives by 0900.

By the time MSD Kodiak arrives on-scene, mobilization of local (Larsen Bay) resources has already begun, as local residents initiate defensive booming of important subsistence areas. The MSD Kodiak Supervisor (first responder on-scene) will serve as FOSC representative for the duration of the response, and will advise the local responders to deploy defensive boom at the sensitive areas identified by the local community in the KSCP Sensitive Areas document. The FOSC notifies the Responsible Parties of their responsibilities to contain and remove the spill, and informs them that he can use government property to accomplish this objective and then bill them for the clean up, or they may replace his equipment in kind. The vessel masters acknowledge that they have limited resources and indicate that they are willing to fulfill their obligation under law.

The LOSC (back in Kodiak) contacts the state (ADEC) to get permission to activate the local response agreement with Larsen Bay so they can deploy the boom in the KIB equipment package (approximately 3000 feet).

Equipment Mobilization and Deployment. In considering the size and type of spill and the resources at risk, the FOSC representative (in consultation with ADEC, the LOSC and local community) determines that the preferred strategy is to keep all oil offshore until it can evaporate or dissipate. The primary objective of the response is to ensure that the least possible amount of oil reaches the shoreline.

Because the spill is moderate in size and the Responsible Parties’ resources are finite, response equipment is limited to that which is located in Larsen Bay (either at the cannery or in the KIB Equipment package). Equipment is deployed via the local response agreement between the Borough and Larsen Bay, using 3 skiffs as work vessels.

First, boom (and sorbents) are deployed around the leaking vessels, which are still floating. Responders then begin defensive booming of streams. Only hazwoper-trained individuals may

deploy boom around the vessels, and individuals who undertake defensive booming at the stream mouths must also have had a minimal level of hazardous materials training. The FOSC will ensure that only properly trained individuals engage in boom deployment. The first protection priority (identified by the local community and LOSC) is to keep the oil out of Larsen Bay by booming across the bay. The other major priority is to boom off or protect Brown's lagoon (see discussion of sensitive areas below).

By Hour 6 of the response (1100), boom has been deployed around the vessels. By Hour 8 (1300), Larsen Bay has been boomed, and by Hour 10 (1500), Brown's lagoon has been boomed.

By late afternoon, reports begin to come in that there is evidence of some oil reaching the shoreline. ADEC dispatches an investigator that evening to verify this report. ADEC Environmental Health personnel will also sample local shellfish to determine whether they are safe for consumption.

Wildlife and Sensitive Areas Protection. Local protection priorities in Larsen Bay include the clam beds and salmon streams in Brown's Lagoon and Larsen Bay. Brown's Lagoon has been identified by the local community as a protection priority, and this area is also considered to be important wildlife habitat by USFWS.

The FOSC representative requests that the LOSC contact the Alutiiq museum to get an archaeologist to consult on protecting nearby cultural and historical sites.

Sea otter concentrations and herring spawning are two major considerations this time of year (summer), and Brown's lagoon is important for both of these activities. The LOSC communicates with Larsen Bay and also the USFWS to identify additional protection priorities, which are forwarded to the FOSC. Brown's lagoon is the only place in the immediate vicinity with an anadromous stream.

In the days following the spill, USFWS will contact the Coast Guard to determine whether any wildlife has been oiled.

Clean Up and Recovery. Collected oil is left in the booms until it evaporates or dissipates. Any oiled sorbent materials are collected by the USCG MSD and properly disposed of.

SCENARIOS: PART THREE - SOURCE UNIDENTIFIED

Situation. At first light (0630) on September 6, an incoming Alaska Airlines jet reports to the tower that there is a sizable amount of oil in Chiniak Bay between Woody Island and Kalsin Bay. This is confirmed by a USCG helicopter operating in the area. No vessels are in the immediate vicinity to be designated as possible responsible parties. The USCG helicopter reports the spill as covering most of the area between Woody/Long Islands and Middle Bay/Kalsin Bay. The slick is rainbow in some sections, dark in others.

At 0800, MSO Anchorage sets up an Incident Command at MSO Anchorage with plans to move to Kodiak that afternoon if necessary. The forward command center is established at MSD Kodiak.

At 0800, a private citizen reports to Alaska State Troopers strong fuel smells and diesel washing up on the beach at Kalsin Bay. The report is relayed to MSD and ADEC at 0820.

Notification. At 0650, MSD Kodiak is notified via the Air Station and Alaska State Troopers, who also notify the ESD and ADEC.

Initial Response Actions. MSD Kodiak requests an overflight from the Air Station, and the MSD investigator examines the spill to determine whether it can be contained. MSD Kodiak, serving as the FOSC representative, determines that the spill is large enough to merit some deflective booming of threatened shoreline areas. Because no RP can be identified, the Coast Guard assumes responsibility for the spill response as allowed by the National Contingency Plan and federal regulations. A small command post is established at the MSD office, where an LOSC representative acts as a public liaison and keeps the local community informed of the ongoing response.

The FOSC representative enlists the help of hazwoper-trained local responders, primarily USCG personnel and environmental response personnel from Space Mark.

Equipment Mobilization and Deployment. The Buskin River and other salmon streams in Women's Bay are identified as protection priorities, and deflective boom is deployed at the mouth of the Buskin by Coast Guard work crews using MSD Kodiak equipment and vessels (2 skiffs). A total of 5,000 feet of boom (from MSD Kodiak warehouses) would be deployed in the following manner: 500 feet each at Sargent and Salonie Creeks; 1500 feet at the Russian River, and 2500 feet at the Buskin River.

Wildlife Response and Sensitive Areas Protection. There are several important salmon streams in the area, including the Buskin River, Russian River, Sargent Creek and Salonie Creek. Waterfowl populations would also be at risk from the spilled oil. Protection of salmon streams (deflective booming at the mouths) would be a major priority.

SCENARIOS: PART FOUR - WORST CASE DISCHARGE

This spill is based on the Perl Rock scenario developed by Cook Inlet Spill Prevention and Response, Inc. for their Technical Manual. Because in this case the Responsible Party has access to significant response resources, equipment and personnel through CISPRI, the Incident Commander is a representative of the Responsible Party. Federal, state and local agencies serve primarily in an oversight capacity, monitoring the response and clean up and providing input and direction regarding wildlife, sensitive areas, and nearshore protection. For this reason, this scenario describes physical response actions (mobilization, boom deployment, etc.) in less detail than Scenario 1. Instead, the narrative in this scenario concentrates on the formation of a Unified Command and a MAC group, and the response actions which are mounted in Kodiak. The purpose of this scenario is to demonstrate how local Kodiak government and response personnel will integrate into a large spill response when the spill occurs outside the Kodiak Subarea (no Kodiak LOSC).

Situation. At approximately 0300 on 15 April, the T/V Blue Ridge carrying a cargo of Cook Inlet crude oil suffers a steering malfunction causing the vessel to ground in the vicinity of Perl Rock at the entrance to Cook Inlet. The weather conditions at the time are 10 knot winds constant from the Southwest with seas 5 feet or less.

By the end of day one, 75,000 barrels of oil have been spilled. This is the total amount of the release.

Notifications. The Responsible Party notifies ADEC and the Coast Guard. The RP notifies response personnel, including CISPRI and the Homer Vessel Administration. CISPRI activates their Immediate Response Team (IRT) and Short Notice Response Team (SNRT) contractors. ADEC notifies Kodiak through the 24-hour Kodiak Police Dispatch number. Kodiak Police Dispatch notifies the Emergency Services Director. At 0700, the Emergency Services Director notifies and activates the Emergency Services Council.

Initial Response. All initial command functions and communications will originate from the CISPRI command center. A Unified Command is formed, consisting of a FOOSC, SOSOC and RPOSC. The Unified Command and the RP decide to activate CISPRI vessels of opportunity, which are contracted to respond to the scene. CISPRI response personnel (Initial Response Team) begin to arrive on scene within 2 hours of notification. CISPRI Short Notice Response Team, with Hazwoper trained personnel, begin to arrive on scene within 4 to 8 hours of notification.

Wildlife and Sensitive Areas Protection. Based on the initial spill trajectory developed by NOAA, the spill impacts the shore at Perl Island, Elizabeth Island and Chugach Passage almost immediately. During the first 72 hours, shoreline protection strategies are focused on protective booming of sensitive areas (as identified by sensitive areas maps and Natural Resource Agency Trustees.) The Marine Wildlife Rescue Team is activated to provide hazing and wildlife recovery as appropriate.

Resources determined to be at immediate risk include anadromous fish streams at the southern tip of the Peninsula (directly north of Perl Island), the northwest side of Perl Island and the East side of Elizabeth Island. Bald eagles are present in the area in high concentration. Pelagic cormorants, red-faced cormorants, tufted puffins, black-legged kittiwakes and glaucous winged gulls are all present in concentrations of less than 1,000. Stellar Sea Lions and harbor seals are

both present in fairly high concentrations. Soft shell and razor clams are present as well along some threatened shorelines.

Following the spill, USFWS will request assistance in surveying the area to determine if any wildlife have been oiled.

Kodiak Ramp Up

Although the initial trajectory diagrams do not indicate an immediate threat to Kodiak, the Emergency Services Council (ESC) begins to ramp up for the possibility of oil threatening Kodiak. The ESC designates a Kodiak representative to travel to the command center in Nikiski and provide input into the Unified Command through the Multi-Agency Coordination Committee (MAC). The ESC also designates a contact point in Kodiak to serve as a public information officer, reporting to the ESC on the spill response and handling all press inquiries. These designations will be made on Day 1.

By Day 2, the ESC will begin to consult with the Kodiak MAC representative regarding the possible need to establish a forward command post in Kodiak. Depending upon the trajectory, the ESC will consider the command post locations identified in the Kodiak SCP. The ESC will also consider deploying locally-owned response equipment to protect areas potentially threatened by the moving oil. The ESC may activate the local ADEC response agreement in order to release this equipment. Response equipment deployment would be carried out judiciously according to the sensitive areas protection priorities described in the Kodiak SCP.

As the response continues, and depending upon the movement of the oil, the ESC may also choose to establish a public information center in Kodiak. If and when oil does begin to threaten Kodiak shorelines, the Kodiak representative in the MAC will suggest implementation of a volunteer coordination plan for Kodiak. If a forward command post is established in Kodiak, the ESC will assign an additional representative to work as a liaison with the forward command.

Figure G-8: Spill Trajectory Hour 6



Tesoro Drill

Estimate for: 0900, 4/15/96

Prepared: 1548, 10/21/96

MASS Trajectory Analysis

SPILL HR: 6

NOAA/HAZMAT/MASS (206) 526-6317



These estimates are based on the latest available information. Please refer to the trajectory analysis briefing and your Scientific Support Coordinator (SSC) for more complete information. This output shows estimated distributions of heavy, light, and medium concentrations as well as an outer confidence line. The confidence line is based on potential errors in the pollutant transport processes.

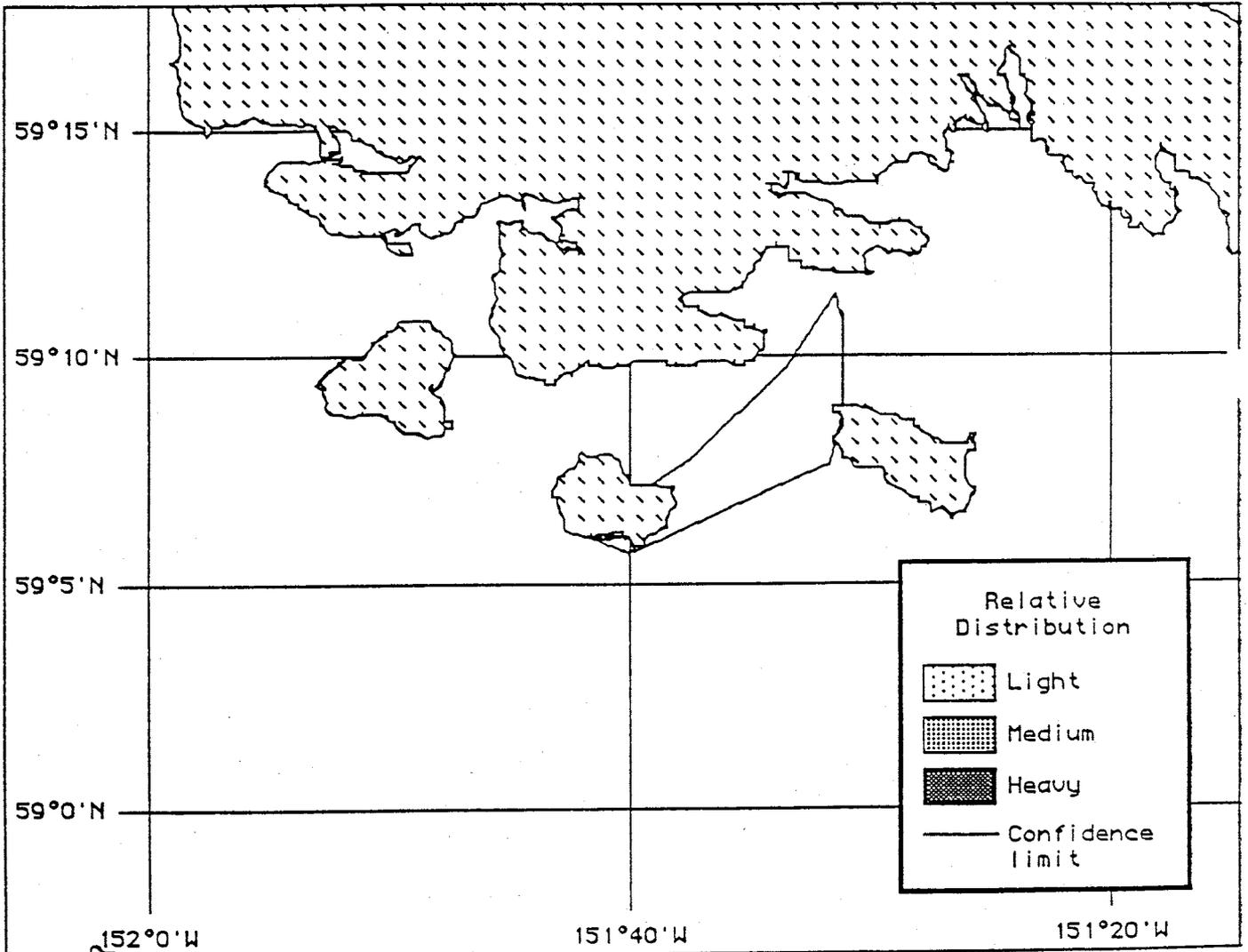


Figure G-9: Spill Trajectory Hour 12



Tesoro Drill

Estimate for: 1500, 4/15/96

Prepared: 0944, 10/22/96

MASS Trajectory Analysis

SPILL HR: 12

NOAA/HAZMAT/MASS (206) 526-6317



These estimates are based on the latest available information. Please refer to the trajectory analysis briefing and your Scientific Support Coordinator (SSC) for more complete information. This output shows estimated distributions of heavy, light, and medium concentrations as well as an outer confidence line. The confidence line is based on potential errors in the pollutant transport processes.

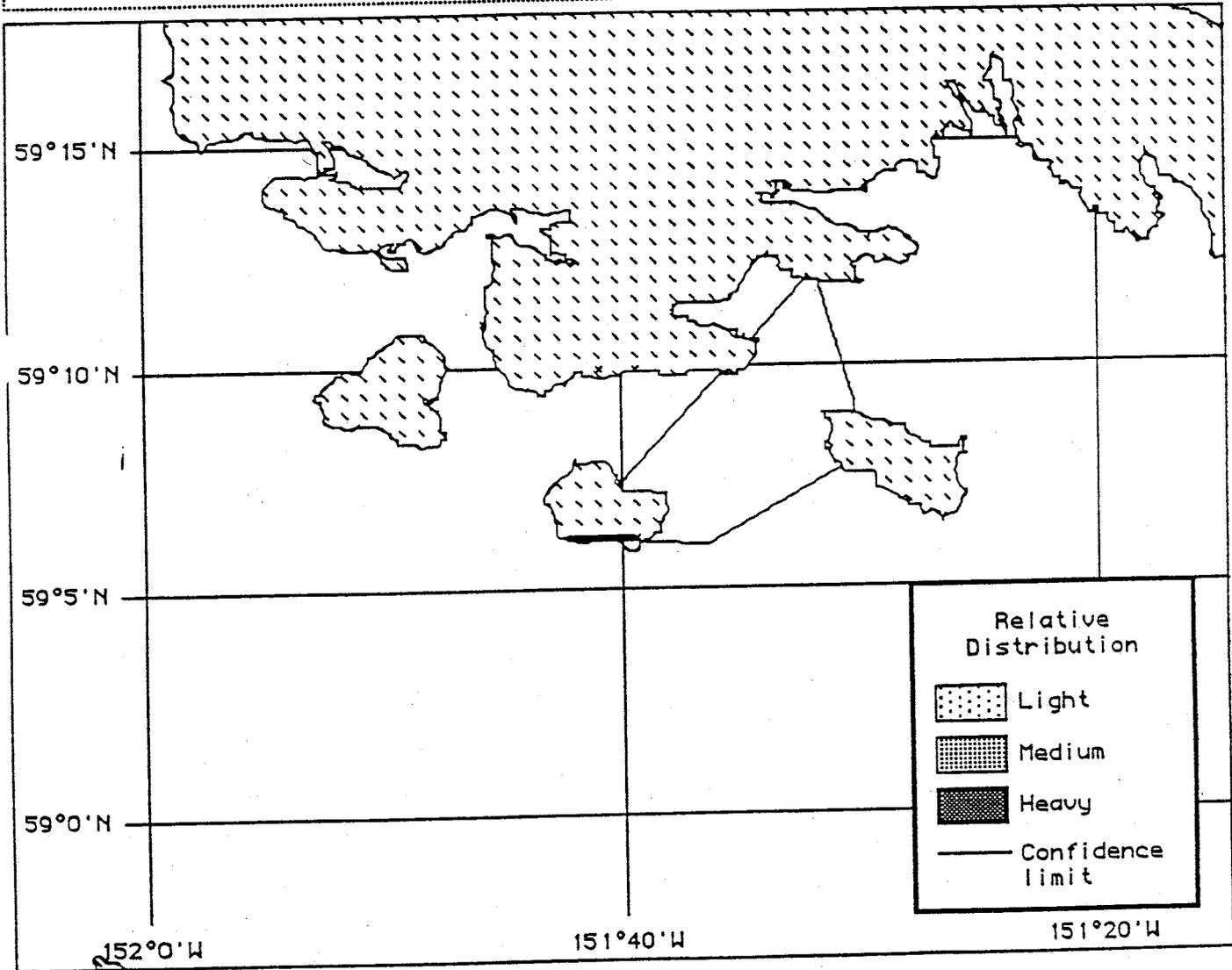


Figure G-10: Spill Trajectory Hour 24



Tesoro Drill

Estimate for: 0300, 4/16/96

Prepared: 0945, 10/22/96

MASS Trajectory Analysis

SPILL HR: 24

NOAA/HAZMAT/MASS (206) 526-6317



These estimates are based on the latest available information. Please refer to the trajectory analysis briefing and your Scientific Support Coordinator (SSC) for more complete information. This output shows estimated distributions of heavy, light, and medium concentrations as well as an outer confidence line. The confidence line is based on potential errors in the pollutant transport processes.

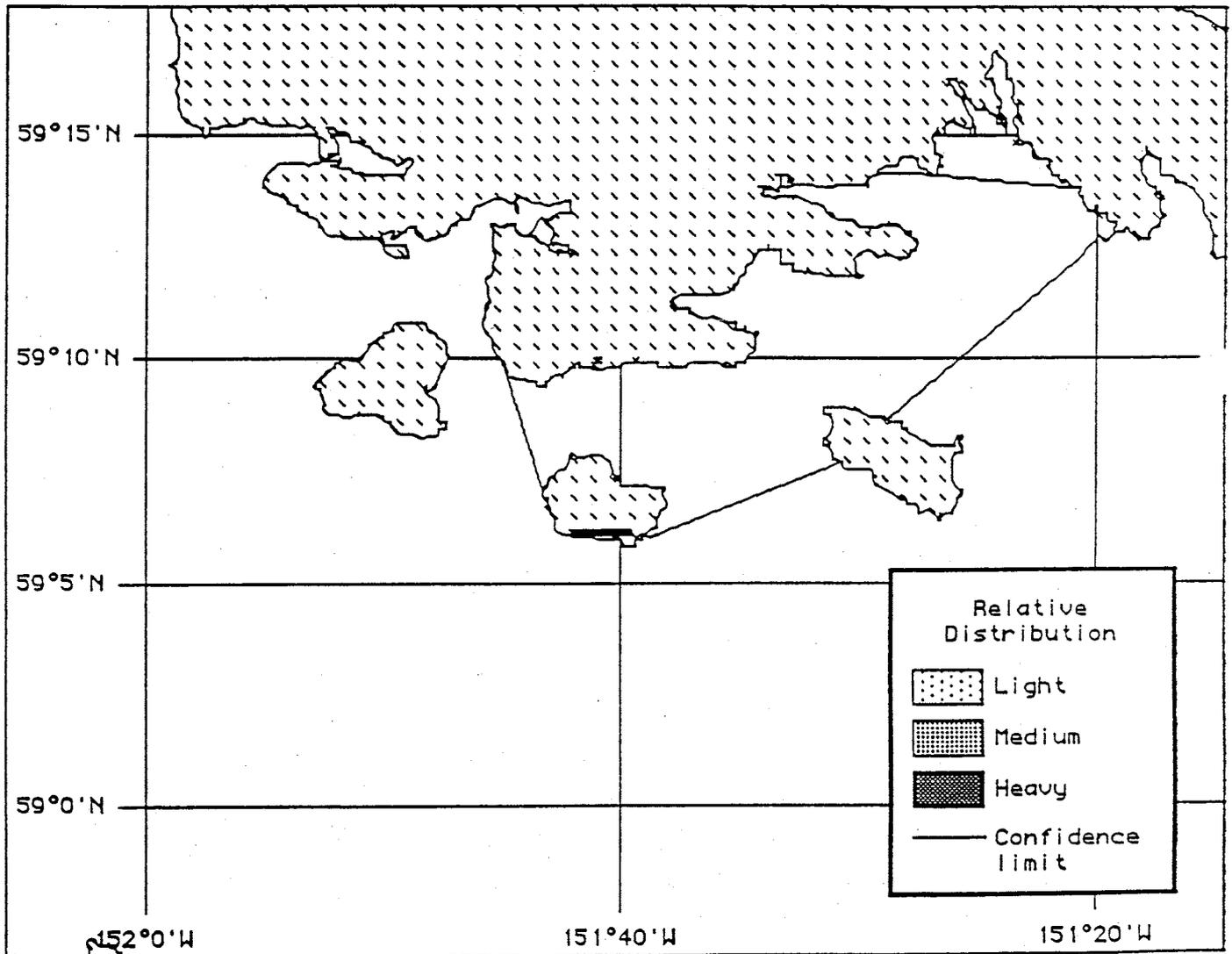


Figure G-11: Spill Trajectory Hour 36



Tesoro Drill

Estimate for: 1500, 4/16/96
Prepared: 1548, 10/21/96

MASS Trajectory Analysis

SPILL HR: 36

NOAA/HAZMAT/MASS (206) 526-6317



These estimates are based on the latest available information. Please refer to the trajectory analysis briefing and your Scientific Support Coordinator (SSC) for more complete information. This output shows estimated distributions of heavy, light, and medium concentrations as well as an outer confidence line. The confidence line is based on potential errors in the pollutant transport processes.

