

US Defense Imagery, photo DF-SN-83-01207



A right side view of two vehicle-mounted Soviet SS-5 Slean medium range ballistic missiles

## The Missiles of Anadyr: Soviet Cold War Plans That Could Have Included the Destruction of RCAF Station Comox, 1962–1969

by Sean M. Maloney

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### Introduction

For the bulk of the Cold War, the Canadian and American populations possessed an acute but undefined sense of the nuclear threat. This unease expressed itself in civil defence exercises, elaborate military alert exercises, and, to some extent, through early efforts at anti-nuclear activism. Public commentary focused upon gaps, be they bomber or missile, and upon a variety of crises that had nuclear potential. The most obvious case in point was the Cuban Missile Crisis of 1962, which focused the world's attention upon the Caribbean and the eastern seaboard of North America.

In Europe, there was a more immediate sense of the threat from the Soviet Union and the Warsaw Pact. Berlin was surrounded. The Inner-German Border, better known as the Iron Curtain, was a visible reminder of the issues at hand. It was known by Western Europeans that they were outnumbered by Warsaw Pact conventional forces, and that tactical nuclear weapons would probably have to be used to repel Pact forces if the situation required it.

The Pacific Northwest, however, was a strategic backwater with almost no public attention directed towards it. The romance of Alaska, and, by extension, its Cold War proximity to the Soviet Union, was much more prevalent in popular culture in the early years, but this slipped away as the Cold War progressed. Yet, in the late-1950s and early- 1960s, there were *significant* if low key developments undertaken by the Soviet Union that put this region 'under the mushroom cloud,' as it were. If nuclear war had erupted, the Soviet and Canadian/American forces in the region would have fought their own virtually private war between themselves, disconnected from Washington DC and the Atlantic sea lanes, remote from the access routes to Berlin, and far away from NATO's Central Region. *Why and how* was this the case? And why was such a dire situation nearly overlooked during the dangerous crisis years of the early-1960s?

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In 1962, a US Lockheed P2V *Neptune* patrol aircraft overflies a Soviet freighter during the Cuban missile crisis.



Fidel Castro and Nikita Khrushchev, 1962

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A Myasishchev M-4 (Mya-4) *Bison*

## Christening the Ground: The Soviet Base Complexes in the Far East

The Alaska-Pacific Northwest region constituted a distinct arena of the Cold War. Canadian-American war plans in the late-1940s conceptualized Alaska as the front line if war had erupted over the Berlin crisis, and later, the Korean crisis. Various scenarios, including the possibility that Soviet airborne forces might seize bases in Alaska and then rain V-2-like missiles or launch B-29-like bomber aircraft equipped with nuclear weapons onto the lower mainland existed. As a result, intense American aerial surveillance operations were mounted *up to* and even *into* Soviet airspace, from the Chukotsky peninsula, down along the Kamchatka peninsula, the Kuriles, and then to Vladivostok. These flights searched for early warning radar systems, bomber and fighter bases, and collected aerial samples of nuclear debris from Soviet tests. Importantly, the flights confirmed that the Soviet base areas tended to be clustered around Vladivostok and Petropavlovsk. There were no indicators that extensive logistic preparations had been made in the region to launch an attack on North America from this area at the time.<sup>1</sup>

However, with the advent of U-2 reconnaissance overflights starting in 1956, better coverage revealed important changes. Partly in response to the increased bomber capabilities of the Strategic Air Command (SAC), and partly in response to Soviet jet bomber developments, significant interest was directed by the Soviets at eastern Siberia as a venue to strike North America and defend the Soviet Union. That manifested itself in the improvement of existing airfields, and the construction of new airfields. The closest one to North America was a former Lend-Lease staging base located across the bay from a small port city named Anadyr.

By the late-1950s, the Soviet long range air forces were equipped with the TU-16 *Badger* medium bomber, which did not have the range to reach targets in the continental United States without forward staging or aerial refuelling. They could, however, reach Alaska, which, at the time, was essentially a large early warning apparatus and a support structure for SAC. Furthermore, SAC had an extensive aerial refuelling capability and was not dependent upon forward basing. However, elimination of Alaska with the TU-16 force would not have contributed to strategic success in a general war with NATO during, say, the 1958-1959 Berlin Crisis, or the 1961 Berlin Crisis.

Indeed, Soviet interests in the Far East were, at the time, more closely focused upon the Vladivostok-Sea of Japan-Kuriles theatre. There were American nuclear capabilities in Japan, Korea, and in the Pacific, and they had assigned targets in the Vladivostok area, as well as in China and in North Korea. A cluster of airfields in and around Vladivostok hosted three Heavy Bomber Regiments equipped with TU-16, some nine squadrons. The 12<sup>th</sup> Main Directorate of the Ministry of Defence (12<sup>th</sup> GUMO), the organization that handled the custody and control of Soviet nuclear weapons, had storage facilities in Primorsky and Khabarovsk.<sup>2</sup>

As the 1950s progressed, the intercontinental Tupolev TU-95 *Bear* and the Myasishchev Mya-4 *Bison* bombers were deployed, mostly to bases in the interior of the Soviet Union. At varying levels of alert, several airfields on the perimeter of the Far East, called ‘bounce’ airfields in Russian terminology, would receive bombers for staging against distant targets.

One airfield designated as a ‘bounce’ airfield was Anadyr, located on Chukotsky peninsula. By 1958, Anadyr hosted a detachment of MiG-19 interceptors from the 529<sup>th</sup> Fighter Aviation Regiment, and, in the hills above the community, a radar station for early warning and interception from the 75<sup>th</sup> Radio-Technical Regiment was built. Tucked away in a valley several miles east of the airfield, a base capable of housing a brigade’s worth of personnel was also established. This facility, however, was actually under the control of the 12<sup>th</sup> GUMO. In great secrecy, tunnels were excavated under the adjacent hills, and nuclear bombs for the bomber force were moved in and secured there.<sup>3</sup> There is no indication that the American intelligence apparatus was aware of the existence of “Objekt Gudym” (as the facility was known in the USSR, after the nearby town) at the time, or even well into the 1960s.

In March 1958, soon after the completion of the new facilities at Anadyr air base, a pair of TU-16 *Badgers* was suddenly detected by radar stations as they paralleled the coast of mainland Alaska over international waters.

USAF F-102 interceptors on alert at Galena air field scrambled, but were unable to intercept them. These Soviet *Badger* flights continued sporadically, but the limitations of the F-102 prevented interception. The first successful interception and observation of Soviet bombers by the F-102 squadrons in Alaska did not occur until 5 December 1961.<sup>4</sup>

The introduction of Soviet nuclear ballistic missiles in the Far East occurred with the activation of the “57<sup>th</sup> Artillery Range Administration,” a cover name for the 9<sup>th</sup> Independent Missile Corps based in Razdolnoye, in a large valley north of Vladivostok. (The unit shed its secret identity in 1961.) Its primary operational unit was the “652<sup>nd</sup> Engineer Division,” a cover name for what was eventually designated the 45<sup>th</sup> Missile Division. This organization was equipped with four different types of intermediate and medium-range ballistic missiles. The rapid pace of technological change resulted in the phased and overlapping deployment of the R-5M Intermediate Range Ballistic Missile (IRBM) (AKA SS-3 *Shyster* to NATO), the R-12 IRBM (SS-4 *Sandal*), the R-14 Medium Range Ballistic Missile (MRBM) (SS-5 *Skean*) and R-14U MRBM (a silo-based version of the R-14) to Razdolnoye and vicinity between 1959 and 1962. All carried warheads that yielded between 1 and 2.5 megatons. These systems were targeted against American nuclear-capable air bases in Japan, Guam, South Korea, and later, against China. However, none of these systems could reach North America from their launch pads near Razdolnoye.

Indeed, these early missile systems were fairly vulnerable. The liquid-fuelled rockets were stored on transporter-erector trucks in bunkers, and were then deployed to a fixed concrete pad

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during an alert. The arm of the vehicle raised the missile, which was then attached to the pad, the fuel was loaded, and finally, the missile was launched. The time to load the missiles with fuel was substantial, and if the missiles were subsequently taken off alert, they had to be defueled. The R-14U was silo-based, and a better variant of this missile.<sup>5</sup>

### Operation Anadyr: Deception Everywhere?

The narrative of the decision-making process that led Nikita Khrushchev and the other Soviet leaders to station R-12 and R-14 ballistic missiles and their megaton-yield warheads in Cuba is well-known. A combination of factors convinced Khrushchev that this course of action was necessary to preserve Soviet prestige and to protect the emergent ‘socialist’ world, as epitomized by Fidel Castro’s Cuban revolution. In early May 1962, a plan to deploy Soviet conventional weapons and forces to Cuba was mooted, but it was during a trip to Bulgaria on 11 May that the idea of including nuclear weapons emerged. After extensive discussions on 20 May, followed the next day by a meeting of the Presidium, the decision to mount this operation

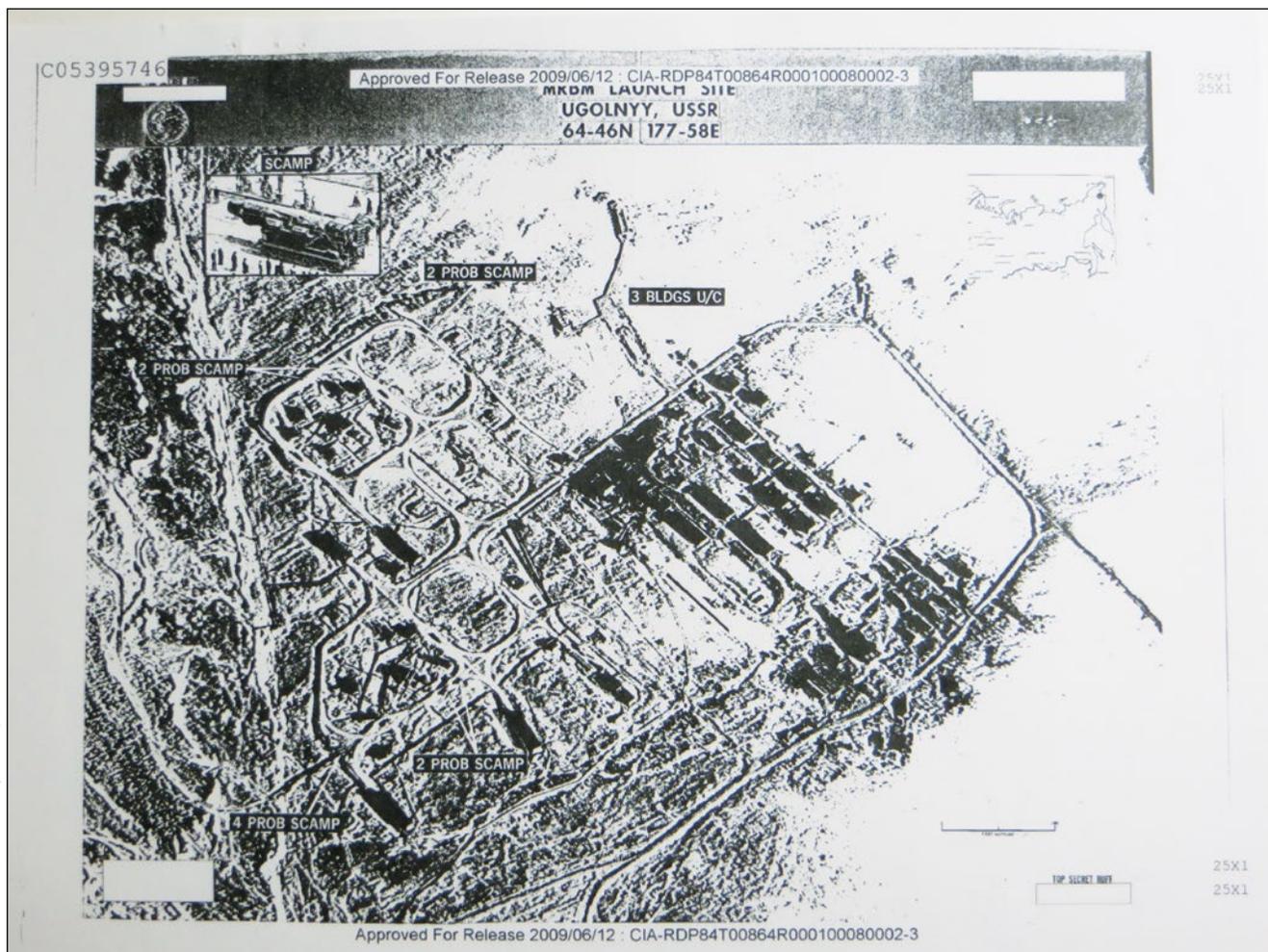
was taken. The Ministry of Defence, already leaning forward, had a plan ready to go.<sup>6</sup>

Soviet operations were traditionally mounted with whole catalogues of deceptive measures. The mobilization of so many resources, and particularly missile-oriented resources, demanded a suitable distraction. The central focus for the Cuban venture was the air base at Anadyr. Personnel were told they would be going to a ‘cold place’ and given winter gear and training. By the end of May 1962, the whole operation was allocated the code-name *Anadyr*.<sup>7</sup>

“Soviet operations were traditionally mounted with whole catalogues of deceptive measures.”

Beyond this minor discussion, none of the plethora of books dealing with the Cuban Missile Crisis mentions any activity in Anadyr itself in relationship to the operation, just that the name was used for deception purposes.

However, there appears to have been more to Operation *Anadyr* than meets the eye. In June 1962, the 45<sup>th</sup> Missile Division, stationed near Vladivostok, activated the 83<sup>rd</sup> Missile Regiment. Four waves of transport aircraft delivered four R-14 (SS-5 *Skean*) ballistic missiles, their ground support equipment and personnel to the Anadyr air base.<sup>8</sup>



Declassified by the CIA, this image shows the ballistic missile launch sites for R-14 (SS-5 *Skean*) missiles at Ugolnyy, taken in 1966 by an NRO KH-7 *Gambit* satellite equipped with a high resolution spotting system. (Source declassified under the Freedom of Information Act, 2015.)

The 83<sup>rd</sup> Missile Regiment occupied a special facility constructed in a valley east of the domestic site and the 12<sup>th</sup> GUMO-controlled nuclear weapons storage facility. This site was called Ulgoln'y, named after the town near the air base, and it was not referred to as Anadyr. It consisted of over thirty structures, but the most relevant ones for our purposes here are four concrete launch pads and four large concrete Nissen Hut-like buildings. These buildings could each hold one transport-erector vehicle with one R-14 missile mounted on it. Each of these alert buildings had an associated building that was roughly one-third larger than the alert buildings. These were likely used for additional missile storage. The capacity of the Ulgoln'y site appears to have been eight-to-twelve R-14 MRBMs, each carrying a 2.3 megaton yield warhead.<sup>9</sup>

Of parenthetical note, the 762<sup>nd</sup> Anti-Aircraft Missile Regiment equipped with the SA-2 *Guideline* surface-to-air missile (SAM) established itself in Shakhtyorsk, a small settlement between the air base and the radar station at the same time the R-14 unit arrived in 1962.<sup>10</sup> The missile launchers themselves were spread out in a line on a bluff east of the radar station.

When exactly the Ulgoln'y ballistic missile site achieved alert status with its R-14s is unclear. One official Russian source claims that it was not declared ready for combat duty until January 1964.<sup>11</sup> However, which R-14s the official sources are referring to is blurred. One of the Russian sources suggests that the Ulgoln'y site was, in fact, the second site, implying that a more rudimentary facility was available temporarily until it was completed.<sup>12</sup> Therefore, does the official Russian combat readiness date of January 1964 refer to the first R-14s deployed in June 1962? Or does it refer to the completion of the Ulgoln'y facility and its readiness?

Like a Matrushka Doll, it is entirely possible that there were multiple and concurrent Soviet deceptions in play in the summer of 1962. The June deployment to Anadyr by the 83<sup>rd</sup> Missile Regiment and its construction may have been part of the deception plan for Operation *Anadyr*. U-2 and other reconnaissance flights would see activity associated with missiles in Anadyr and conclude that any mention of Operation *Anadyr* in other sources related to this activity and not to what was happening in Cuba.

But what if there was more to the Anadyr missile deployment? American estimates on the ranges of the R-12 and R-14 were off by nearly 22 percent. Charts used in briefings for that crisis reflected CIA range estimates. The *actual* range for the systems was 2080 kilometres and 4500 kilometres respectively.<sup>13</sup> Based in Cuba, the R-12 could cover approximately three-quarters of the United States, and the R-14 could cover practically all of them. Washington state, however, was at the outside edge of the operating envelope for the R-14, and it was possible that accuracy would be seriously reduced. However, if they were based in Anadyr, the R-14s could provide overlapping coverage of several targets if necessary. The possibility that the Anadyr R-14s had both a deceptive *and* an operational function should not be discarded either.

What did the Americans know and when did they know it? Anadyr in its forward interceptor base form with its radar, air

base, and SAM sites, was known. A reconnaissance project called *Congo Maiden* involving U-2 aircraft based in Eielson AFB in Alaska used "long range oblique photography...against Soviet Arctic Coastal objectives." These were supplemented with eight monthly sorties of RB-47 aircraft "flown...around the Soviet Arctic periphery from Petropavlovsk...to Novaya Zemla in the Barents Sea."<sup>14</sup> These flights were curtailed after the May 1960 U-2 shoot down, but were resumed by President Kennedy in February 1961.<sup>15</sup> A U-2 subsequently overflew Sakhalin Island on 30 August 1962, which generated Soviet protests.<sup>16</sup>

Oblique imagery of the domestic site would not necessarily have revealed the existence of the underground nuclear storage facility. A 1971 CIA analysis of Soviet 'peripheral strike forces' noted the existence of the Ulgoln'y missile site, identified it by that name, and suggested it had been built "in the early-Sixties."<sup>17</sup> Declassified imagery of the Ulgoln'y R-14 missile site dates from 1966.<sup>18</sup> However, it is entirely possible that the existence of Ulgoln'y was not known to the Americans in 1962-1963.

### Going to War with the 83<sup>rd</sup> Missile Regiment

What would the Soviet leadership have gained by deploying R-14 ballistic missiles to Anadyr? There are a number of possible advantages. Until the mass deployment of reliable ICBMs in the mid-to-late-1960s, the missiles of Anadyr supplemented the contemporary R-16 (SS-7 *Saddler*) Intercontinental Ballistic Missile (ICBM) force as it was slowly deploying. There were not enough R-16s to go around, and if the shorter-range IRBMs could cover some of the targets, so much the better. Another advantage was that the deployment was discrete, and it was located on Soviet territory. If 'push came to shove' over Cuba or Berlin in 1963, this capability was unnoticed by American forces, and therefore, could have wreaked some havoc within carefully defined limits.

The main limitations of the system revolved around the readiness of the missile itself. The relevant figures for the R-14 are not available, but those for the R-12 *are* available, and they were probably similar. There were four readiness states, 4 through 1. For the R-12, the preparation times were 205 minutes from State 4; 140 minutes from State 3; 60 minutes from State 2; and 30 minutes from State 1. Most of this time was absorbed by the fuelling procedure.<sup>19</sup>

Release of the weapons was closely held and extremely centralized. A somewhat alarming CIA analysis conducted in early-1962 noted that:

The Soviets have already taken steps to speed up the process of making the decision to go to war as well as the implementation of that decision. These steps include the assignment of the strategic missile forces to a Supreme High Command which exercises exclusive control over their deployment and use, and the placing of Khrushchev at the head of the country's strategic arm in the post of Supreme High Commander. This post, we think, enables Khrushchev personally, without prior consultation with the ruling collegium, to push the war button.<sup>20</sup>

The same study provides a cogent discussion with respect to Soviet nuclear strategy. In effect, there were three choices: retaliation; first strike; and pre-emption. The bulk of Soviet literature, and a wide variety of intelligence, led CIA analysts to conclude that the Soviets favoured a pre-emption strategy in the early-1960s. If it looked like the United States and her allies were going to attack first, either with conventional or nuclear forces, the Soviets would, if they had the appropriate information, launch first with an aim to taking out as many nuclear systems as possible that were targeted at the Soviet Union.<sup>21</sup> As an aside, agents in the United States military in the employ of Soviet intelligence services were required to report on the change of Defence Conditions (DEFCONs) as one of their priority tasks.<sup>22</sup>

The number of missiles at the Ulgoln'yy site, and the range of the system, tell us in a general sense how they would be employed. The potential target sets within that range break down into three clusters. As a sidebar, we must dispense with a Mercator projection and adopt a conic view of the region to fully illustrate this thinking.

The first target set was in Alaska. Strategic Air Command used Eielson Air Force Base for tanker support to the Airborne Alert force B-52 bombers orbiting over the Arctic. One of three Ballistic Missile Early Warning System (BMEWS) radars was situ-

ated at Clear, Alaska. Elimination of Clear would blind NORAD to subsequent Soviet ICBMs launched after the site was eliminated. On the other hand, and it is unclear if the Soviets understood this possible consequence, destruction of a BMEWS site might have been enough to generate DEFCON 1, the highest state of readiness. US Air Force SAC aircraft, KC-135 tankers in the case of Clear, would be situated in orbits on a 24 hour basis if DEFCON 3 was declared to observe the Clear sites and report to SAC Headquarters in Omaha if it was destroyed.<sup>23</sup> Similarly, there was a *Midas* missile launch detection satellite downlink at Fort Greely. Its elimination would also interfere with NORAD's ability to track an incoming missile attack.

Interceptor forces in Alaska in the early-1960s consisted of two augmented F-102 *Delta Dart* fighter squadrons based at Elmendorf and Ladd Air Force Bases, with four forward deployment bases, each capable of handling a pair of aircraft. There was a

NORAD air defence control centre located at Elmendorf. Some thirty radar sites were situated in Alaska along the Aleutian Chain, the Prudhoe Bay-Point Barrow coast, and in the interior of the state.

The second target set was located on Vancouver Island. Any bomber force that made its way through or around the Alaskan air defence network would have been confronted with the CF-101 *Voodoos* of 409 Tactical Fighter Squadron stationed at RCAF Station Comox, directed with information collected by the radar site at RCAF Station Holberg. These interceptors were conventionally-equipped before 1964, but plans existed to deploy MB-1 *Genie* nuclear air-to-air rockets to them in an emergency.

The third target set was in Washington State. The main NORAD Semi-Automatic Ground Equipment (SAGE) control centre was located at McChord Air Force Base, which also hosted two squadrons of F-106 *Delta Dagger* interceptors capable of employing nuclear air defence weapons. Two more interceptor squadrons were stationed at Adair Air Force Station in Oregon, and Larson AFB near Moses Lake, Washington. Washington State also hosted SAC units: Fairchild AFB and Larson AFB were B-52 *Stratofortress* bases. Also situated around Moses Lake were nine *Titan I* ICBM silos, grouped in threes. And arrayed outside of Fairchild were ten *Atlas E* ICBMs in 'soft' sites.

Finally, there were other strategic facilities in the state. These included Hanford, Washington. The Atomic Energy Commission's reactors located there were responsible for plutonium

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DND/CFJC photo CXG77-1944

Two CF-101 *Voodoos* from 409 Squadron, Comox

production for the entire American nuclear arsenal. The massive Boeing plant was located in Seattle, and there was a substantial US Navy base at Bremerton, as well as facilities in the Seattle area.

The Soviet tendency towards pre-emption gives us a clue as to how the R-14 missiles would have been employed in the early-1960s. High-level Soviet documentation assessed by CIA in 1962 suggested that: "...nuclear missile weapons must be used suddenly, effectively, purposefully and *en masse*," and were "...designed to perform the leading role in the initial period of war."<sup>24</sup> In effect, missiles were to be employed first, and manned bombers second. As for targeting priorities, the then-highly-classified Soviet "Information Bulletin of the Missile Troops," first published in July 1961, discussed a priority list for 'targeteers':<sup>25</sup>

- strategic missile launch sites;
- sites for the production, assembly, and storage of nuclear weapons and of means for delivering them to the target;
- large airfields, air force and naval bases;
- centers of political administration and of military industry;
- large communications centers;
- large factories and power centers;
- arsenals and depots with strategic stocks of armaments military equipment, or strategic raw minerals; and
- strategic reserves and other targets of strategic significance in the deep rear of the enemy.

The capacity of the Ugoln'yy site, however, was less than the number of potential targets in the priority list. Ugoln'yy's four alert R-14s and between four-and-eight reloads would not have been enough to take out the nine dispersed *Atlas E* sites near Spokane, let alone the three clusters of *Titan I* silos near Moses Lake. The 2.3 megaton yield warhead on the R-14 was, according to Russian sources, only useful against surface targets.

As for the second priority, a single R-14 with a 2.3 megaton warhead would have been able to destroy Hanford completely. The assessed accuracy of the R-14 was 5 kilometers.<sup>26</sup> As for the third, Larson and Fairchild AFBs, and possibly Eielson AFB, would have probably been candidates for targeting. The bases at Comox, Elmendorf, and McChord would also rank. And a single warhead over the Seattle area was capable of generating significant damage to multiple facilities.

Given the 1961 targeting priorities, the capacity of the Ugoln'yy site, the reload time for the second and possibly third wave of R-14 missiles, and the extant pre-emption doctrine, while the following scenario is purely speculative, a *possible*, indeed, *plausible* sequence of events could have looked like this:

The Ugoln'yy R-14s are used to clear the way for a coordinated R-16 ICBM strike against Strategic Air Command targets. This would mean hitting the BMEWS radars at Clear, Alaska and the Missile Defense Alarm System (MIDAS) detection satellite downlink at Fort Greely with

two R-14 missiles each to ensure a high probability of kill. The flight times from Ugoln'yy to Alaska would be less than fifteen minutes. The 565<sup>th</sup>, 570<sup>th</sup>, and 772<sup>nd</sup> Missile Regiments, based around Svobodnyy in the Amur Oblast deeper in the Soviet Union, launch a volley of eighteen R-16 ICBMs: three are directed against Eielson, Larson, and Fairchild Air Force Bases with 5 megaton yield warheads (accuracy: within 3 kilometres of the point of aim) to take out bombers and nuclear storage sites on the ground, while fifteen more R-16s are launched against the *Titan I* and *Atlas* sites in the Spokane-Moses Lake area. The plumes from the fifteen 5 megaton-yield warheads detonating in eastern Washington State would have blanketed south-eastern British Columbia and southern Alberta with significant amounts of radioactive fallout, with some contours in lethal dosages.

On re-loading the site with the next four R-14s (after 1.5 to 2 hours), interceptor bases at Elmendorf, Ladd, Comox, and McChord are struck. This destroys the SAGE air defence computer at McChord and the manual operations centre at Elmendorf. Any interceptor forces still on the ground at Elmendorf would have been incinerated, and the McChord special ammunition storage site containing MB-1 missiles for the USAF and RCAF would have been destroyed. If the CF-101 *Voodoos* had not yet been launched or dispersed to smaller air fields, such as Port Hardy or Tofino on Vancouver Island, or RCAF Station Puntzi Mountain in the interior, they would have been destroyed along with the special ammunition storage site located at Comox.

If the missile designated for Comox missed, and it *could* have missed up to five-or-more kilometers on a good day without any other induced error, it would likely have landed in the Strait of Georgia, due to its trajectory from Ugoln'yy. The detonation of a 2.3 megaton yield weapon off Vancouver would have generated a base surge of radioactive water into the city. A detonation *on* or *above* Comox would have left a crater about 1-5 to 3 kilometres in diameter, depending upon the height of the burst, spreading fallout throughout central British Columbia.

By that time, the TU-16 bombers from Vladivostok and the TU-95 and Mya-4 bombers based in the Soviet interior that have already dispersed to the 'bounce' airbases in the Kuriles and Anadyr have launched and are on their way to penetrate a fragmented and disrupted air defence system. Their targets would include Hanford, which is large, stationary and not protectable; the naval base at Bremerton with its nuclear submarines near Seattle; the Boeing plant and airfield; and possibly the Royal Canadian Navy base at Esquimalt, in case US Navy ships or submarines escaping their bases around Seattle sought refuge there. The large dams on the Columbia River might also have been another target.

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Two Convair F-106 *Delta Dart* fighter interceptors of the United States Air Force

Other large airfields in the region that might act as refuges for SAC's bombers or NORAD interceptor aircraft would likely be attacked: Vancouver, for example, was a candidate because of the presence of RCAF Sea Island (now the site of Vancouver International Airport) and its large runway, and its reserve F-86 *Sabre* fighter squadron. Free fall bombs in the megaton yield range directed at Esquimalt and Sea Island would have destroyed Victoria and devastated Vancouver.

These bombers would have had to contend with the comparatively ineffective F-102 force dispersed in pairs to remote airfields in Alaska, then the more effective CF-101s dispersed from Comox, and then any remaining nuclear-equipped F-106 interceptors left in the Seattle area that escaped the McChord strike. The loss of the SAGE bunker at McChord and the control centre in Elmendorf, Alaska, would have seriously attenuated any NORAD response to the incoming bombers. The radar system, which would have included RCAF Station Holberg and RCAF/USAF Station Puntzi Mountain, and perhaps the Makah Air Force Station site at Neah Bay in Washington, would have been left untouched and in a position to direct the remaining fighters. That is, at least until the advent of Soviet ICBMs in substantially greater numbers as the 1960s progressed.

Note that Canadian targets would have been attacked regardless of whether Canada was party to the crisis that generated the attack or not. There is no neutrality in nuclear war.

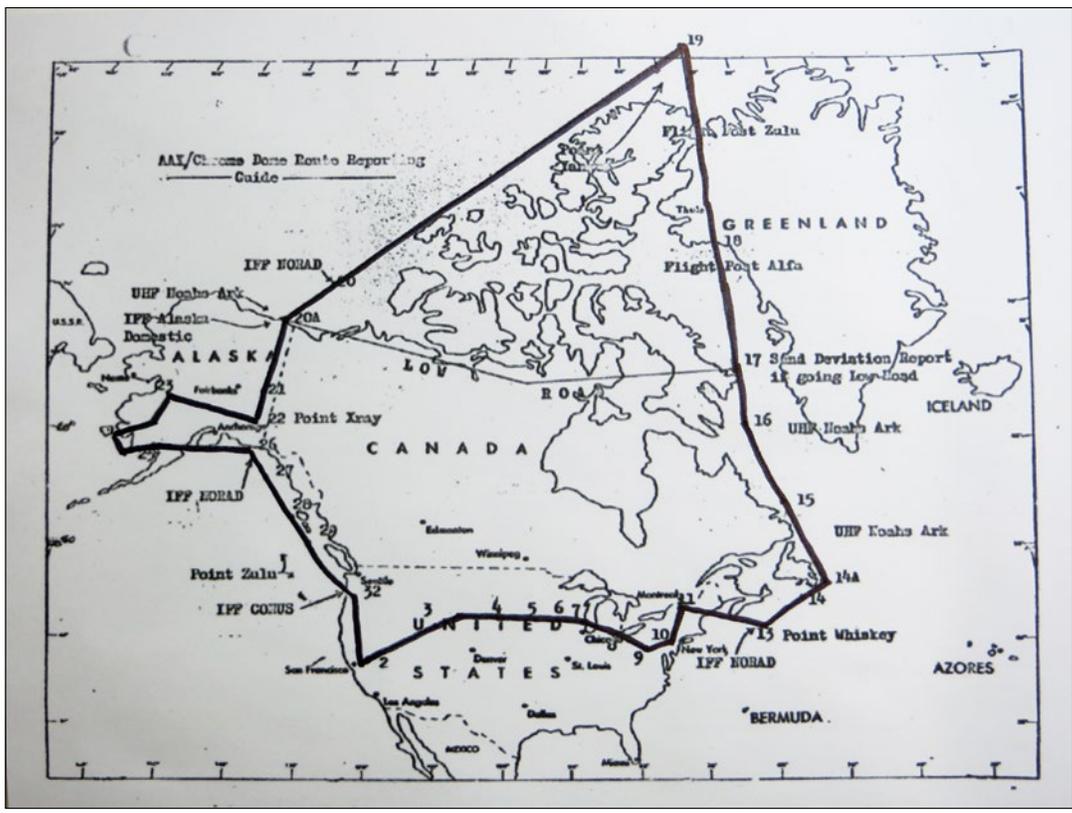
However...

If the Soviets chose this course of action, there were a number of variables that require examination. The first of these was *Chrome Dome*, SAC's Airborne Alert Force. This consisted, in 'peacetime,' of 12 B-52 bombers (most of them built, ironically, by Boeing in Seattle) kept aloft 24 hours a day via aerial refuelling. These B-52s would be augmented as a crisis progressed, initially up to 65 aircraft. One track for the Airborne Alert Force took six B-52s up the Pacific Coast, out to the tip of the Aleutians, up to the North Pole, and back.<sup>27</sup>

In the early-to- mid-1960s, the SAC B-52 force was equipped with a variety of nuclear weapons. The first configuration was two Mk 15/39s (yield: 1.7 megatons each) and the second was four Mk 28Y1R1 (yield: 1.1 megatons each).<sup>28</sup> The aircraft also carried a pair of AGM-28 *Hound Dog* cruise missiles which were usually employed for SAM suppression. The yields of these weapons were set at around 1-to-4 megatons each. The range of the *Hound Dog* was 785 miles, or 1263 kilometres.<sup>29</sup>

The probability that one of the alert B-52s cruising up and down the Alaska-Soviet boundary was assigned to target the 762<sup>nd</sup> Anti-Aircraft Missile Regiment's SA-2 missiles was high. This site was well within range of *Hound Dogs* launched from a B-52 bomber inside American airspace. A 1 megaton airburst over the SA-2 launcher sites would have destroyed the radar site above the town as well. The MiG-19 interceptors may have already been launched from the Anadyr air base, but would have had a tough time tracking and intercepting the airborne alert B-52s with their centralized control destroyed.

Prior to 1963, the SAC targeteers would not have known about the Ugoln'y'y R-14 site. They did not know about the nuclear storage tunnels. The *Hound Dog* strike would have been conducted to facilitate the airborne alert B-52s' penetration of Soviet airspace to hit targets deeper in the interior.



Source: USAF, declassified under the Freedom of Information Act, 2015.

This map depicts the northern *Chrome Dome* B-52 routes with communications check-in points. Six pairs of B-52 bombers each equipped with six nuclear weapons flew this route in a counter-clockwise direction daily. The dog leg to the west over Alaska placed the aircraft within cruise missile range of Ugol'nyy and its facilities.



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A B-52 Stratofortress with air launched *Hound Dog* cruise missiles under each wing

That said, SAC targeteers would have known that the Anadyr air base was large enough to accommodate TU-16 and TU-95 bombers. That fact alone would have dictated targeting it. At the time, the main American nuclear war plans, SIOP-62 and SIOP-63, used the principle of cross targeting. The objective was to destroy any given target with a probability of nearly 100 percent. Not all American nuclear systems had a 100 percent reliability, and thus, several megaton-yield weapons would have been employed against the Anadyr air base to ensure its destruction. For example, the *Titan I* and *Atlas E* ICBMs in Washington State had a reliability rate at the time of only about 50 percent.<sup>30</sup> Thus, two or even three missiles from different bases would be assigned to one target 'island.'

A likely engagement scenario for the Anadyr area prior to the discovery of the Ugoln'yy site might have included the *Hound Dog* strike or strikes on the SAM and radar site, plus a gravity bomb on the airfield, plus a pair of ICBMs against the airfield. In effect, four megaton-yield weapons would have been directed at the area with the hope that two got through. Given the distance from the Ugoln'yy R-14 site to the air base, or to the air defence base,

and the fact that it was located in a valley, it is entirely possible that the Ugoln'yy R-14s would have escaped serious damage or destruction, and the facility could have continued with its activities, 'depending upon the breaks.' Certainly, the 12<sup>th</sup> GUMO storage facility would have escaped destruction unless directly targeted with a ground-burst thermonuclear weapon.

Once the National Reconnaissance Office's *Corona* and *Gambit* satellites identified Ugoln'yy, however, its fate was sealed if war had occurred. A single *Hound Dog* from a passing B-52 would have utterly destroyed the 'soft' site with a 1 megaton air-burst, but it is likely that Ugoln'yy itself was allocated between three-to-five weapons because of the danger it posed. The question would have been whether zero, four, or eight R-14s were launched against their targets in North America. In any event, no matter what the scenario, the Anadyr-Ugoln'yy area would have been reduced to several flooded, radioactive craters very quickly. Just to make sure...

**CMJ**



Ugoln'yy as it appears today. (Source: Google Earth)

Terms: <https://www.google.com/int/en/earth/outreach/tools/index.html>

## NOTES

1. See John Farquhar, *A Need to Know: The Role of Air Force Reconnaissance in War Planning 1945-1953*, (Maxwell Air Force Base, AB: Air University Press, 2004). Thanks also to Alex Wallerstein's "Nukemap" site <http://nuclearsecrecy.com/nukemap/>
2. Michael Holm, a former member of the Royal Danish Air Force intelligence service who specialized in Cold War-era Soviet air order of battle maintains a site which correlates Western data with Soviet-era data. This outstanding resource is located at: <http://www.wv2.dk/new/newindex.htm>. The Order of Battle (ORBAT) for the 12 Главное Управление Министерства Обороны (12<sup>th</sup> GUMO) is at: <http://www.wv2.dk/new/rvsn/l2gumo.htm>
3. Travellers to the region have entered and photographed this abandoned facility. See "Gudym, la base nucleaire secrete de l'ex-URSS," at [http://www.svalbard.fr/nouvelle-polaire/Gudym-base-nucleaire-secrete-ex-URSS-2014\\_10.htm](http://www.svalbard.fr/nouvelle-polaire/Gudym-base-nucleaire-secrete-ex-URSS-2014_10.htm)
4. John H. Cloe, *Top Cover and Global Engagement: A History of the Eleventh Air Force*, (Anchorage, AK: Alaska Quality Publishing, n/d), p. 24; "Attack Detection Prime Alaskan Role," in *St Petersburg Times*, 6 March 1962; FOIA Dwight D. Eisenhower Library [DDEL] "Memorandum of Conference with the President, August 9, 1960."
5. Screen shots from the Soviet documentary "Nuclear Weapons in Readiness for Use" depict this process with the R-14 and are located at <http://militaryrussia.ru/blog/topic-379.html>. Note that the equipment and vehicles employed are reminiscent of the *Corporal* missile system used by the United States and the United Kingdom.
6. Aleksander Fursenko and Timothy Naftali, *One Hell of a Gamble: The Secret History of the Cuban Missile Crisis*, (New York: W. W. Norton, 1997) pp. 171-181.
7. *Ibid.*, p. 191; see also Anatoli I. Gribkov and William Y. Smith, *Operation ANADYR: US and Soviet Generals Recount the Cuban Missile Crisis*, (Chicago: Edition q, 1994) pp. 15-16.
8. This information is derived from four separate Russian internet forums dealing with the history of Strategic Rocket Forces and their systems. See <http://rvsn.ruzhany.info/45rd/index.html> "45 Missile Red Banner Division"; <http://yasnay.ru> See particularly post #503 31 January 2011 for discussion of deployment and construction at Anadyr in 1962; [http://artofwar.ru/s/sukonkin\\_a\\_a/text\\_810.shtml](http://artofwar.ru/s/sukonkin_a_a/text_810.shtml) has a superb article by Alex Sukonkin entitled "Strategic Missile Forces in Primorsky Krai." Note that the Russian Wikipedia entry for the R-14 missile differs from its Western counterpart in that it is significantly more detailed and based upon Russian secondary sources. See note 36 for the deployment dates of the R-14s to Anadyr.
9. Author's analysis of Google Earth imagery of the Ugoln'yy missile site. Note also that tourists visiting Anadyr have made their way into Ulgoln'yy, photographed some of the structures, and put them up on the internet.
10. 762-й зенитно-ракетный полк (762nd Anti-Aircraft Missile Regiment), at <http://www.wv2.dk/new/pvo/sam/762zrp.htm>
11. See <http://rvsn.ruzhany.info/45rd/index.html> "45 Missile Red Banner Division."
12. <http://yasnay.ru> See particularly post #503 31 January 2011 for discussion of deployment and construction at Anadyr in 1962.
13. Pavel Podvig, *Russian Strategic Nuclear Forces* (Cambridge: MIT Press, 2001), pp. 185-188.
14. FOIA DDEL, undated, "Briefing to President Eisenhower on current status of aerial reconnaissance programs which are conducted proximate to Communist territory."
15. FOIA SECDEF, National Security Action Memorandum No. 24: RB-47 Reconnaissance Flights," 27 February 1961.
16. FOIA CIA memo to DCI, "CIA Handling of the Soviet Build-up in Cuba, 1 July-16 October 1962," 14 November 1962.
17. FOIA CIA Intelligence report SR IR 71-5, "Soviet Strategic Forces for Peripheral Strike," May 1971.
18. See 83-й ракетный полк (83rd Missile regiment) imagery from US sources at <http://www.wv2.dk/new/rvsn/83mr.htm>.
19. Pavel Podvig, *Russian Strategic Nuclear Forces*, (Cambridge, MA: MIT Press, 2001), p. 185.
20. FOIA CIA Office of Current Intelligence," CAESAR XVI-62: Soviet Strategic Doctrine for the Start of War," 3 July 1962.
21. *Ibid.*
22. This emerged during the John Walker spy case. See Philip Shenon "Arthur Walker Sentenced to Life; Wider Spying role hinted by U.S.," in *The New York Times*, 13 November 1985, at <http://www.nytimes.com/1985/11/13/us/arthur-walker-sentenced-to-life-wider-spying-role-hinted-by-us.html>
23. FOIA USAF "History of the 6<sup>th</sup> Strategic Wing October-December 1969."
24. FOIA CIA Office of Current Intelligence," CAESAR XVI-62: Soviet Strategic Doctrine for the Start of War," 3 July 1962.
25. *Ibid.*
26. Podvig, p. 188.
27. FOIA USAF "Strategic Air Command Operations in the Cuban Crisis of 1962 Historical Study No. 90 Vol. 1."
28. *Ibid.*
29. Bill Yenne, *B-52 Stratofortress: The Complete History of the World's Longest Serving and Best Known Bomber* (Minneapolis, MN: Zenith Press, 2012), pp. 64-66.
30. See commentary by retired USAF Minuteman control officer Captain Phil C. Walton on early ICBM accuracy at <http://nsaarchive.wordpress.com>, 8 November 2011. "US War Plans Would Kill an Estimated 108 Million Soviets, 104 million Chinese, and 2.3 Million Poles: More Evidence on SIOP-62 and the Origins of Overkill."